Final Report

National Implementation Evaluation of the First Round Health Profession Opportunity Grants (HPOG 1.0)

OPRE Report No. 2018-09

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Overview

Introduction

This is the final report of the National Implementation Evaluation (NIE) of the Health Profession Opportunity Grants (HPOG). In 2010, the Administration for Children and Families (ACF) within the U.S. Department of Health and Human Services awarded the first round of 5-year HPOG grants (HPOG 1.0) to 32 organizations in 23 states; five were tribal organizations. The purpose of the HPOG Program is to provide education and training to Temporary Assistance for Needy Families (TANF) recipients and other low-income individuals for occupations in the healthcare field that pay well and are expected to either experience labor shortages or be in high demand. HPOG 1.0 grantees designed and implemented programs to provide eligible participants with education, occupational training, and support and employment services to help them train for and find jobs in a variety of healthcare professions.

The NIE is part of ACF's Office of Planning, Research, and Evaluation's (OPRE) multipronged research and evaluation strategy to assess the success of the HPOG Program. The NIE included the 27 non-tribal HPOG 1.0 grantees and had three major components: a Descriptive Implementation Study, a Systems Change Analysis, and an Outcome Study. This report summarizes HPOG training and services offered to and received by participants during HPOG 1.0. It also describes the education, employment, and earnings outcomes for samples of participants at varying time periods after enrollment. Additionally, it provides a summary of findings from the NIE Descriptive Implementation and Outcome Studies and Systems Change Analysis, which cover participant experiences, participant outcomes, and grantee program design and implementation over the first 3 to 4 years of HPOG 1.0 operation.

Primary Research Questions

The NIE addressed the following three major research questions:

1. How are health professions training programs implemented across the grantee sites?
2. What changes to the service delivery system are associated with program implementation?
3. What individual-level outputs and outcomes occur?

Purpose

In 2010, Congress authorized funds "to conduct demonstration projects that provide eligible individuals with the opportunity to obtain education and training for occupations in the healthcare field that pay well and are expected to either experience labor shortages or be in high demand." In response, ACF awarded the first round of 5-year HPOG grants to train TANF recipients and other low-income individuals for high-demand, well-paying careers in healthcare. HPOG 1.0 grants programs were required to:

- Prepare participants for healthcare sector employment in positions that pay well and are expected either to experience labor shortages or to be in high demand
- Target skills and competencies demanded by the healthcare industry

- Support career pathways, such as articulated career ladders
- Result in employer- or industry-recognized portable educational credentials (e.g., certificates or degrees) and professional certifications and licenses (e.g., third-party certification, a credential awarded by a Registered Apprenticeship program)
- Combine support services with education and training services to help participants overcome barriers to employment
- Provide training services at times and locations that are easily accessible to targeted populations.

Key Findings and Highlights

Key findings from the report include:

- HPOG was successful in training high numbers of individuals in healthcare occupations. In just over 5 years of operation, HPOG 1.0 grantees served more than 36,000 individuals (well above the target of 31,000 participants) and engaged most of them in healthcare occupational training.
- Most participants who completed training did so within 18 months of entering the HPOG Program. Of participants who engaged in training, 73 percent had completed 18 months after program entry and 78 percent had completed at 36 months after entry. Participants who completed a training course within 18 months after enrollment spent an average of 3.5 months in training.
- Overall, employment and earnings continued to increase through 12 quarters following HPOG enrollment, with steeper increases in earlier quarters. There were different patterns of earnings and employment for those who completed and did not complete training. Both groups saw higher earnings and employment than before enrollment, but employment rates and earnings were higher for those who completed training (77 percent and $6,433 in the 12th quarter after completing training, compared to 68 percent and $5,263 for those who did not complete training).
- From 2 years prior to enrollment to 3 years following enrollment, TANF recipients experienced a 112 percent increase in employment; among those employed in a quarter, they experienced a 53 percent increase in earnings.
- Employment and earnings trajectories over 12 quarters after enrollment were generally positive for those who completed training in each of the five most common occupations, with both employment and earnings increasing at different levels for different occupations.
- Seventy-two percent of those employed after HPOG enrollment were employed in healthcare jobs. On average, those employed worked full-time, and those employed in healthcare jobs had higher hourly wages and better employment benefits than those who had jobs in other sectors.

- The demographic profile of HPOG participants did not vary much over the 5-year grant period. The majority of HPOG participants were female, from ethnic minority groups, never married, and parents.
- More than half of participants engaged in at least one pre-training activity. First participation in pre-training activities, receipt of support services, and enrollment in training increased only very slightly from 18 months to 36 months after enrollment, indicating that most participants first received supports or enrolled in training in the first 18 months after entering the program.

Methods

The major research question for the NIE Outcome Study examines how HPOG participants fared in educational attainment and employment and earnings during and after program enrollment. The study measured education outcomes through course completions and credential attainment. The employment- and earnings-related measures include quarterly employment and earnings, hourly wage, and employee benefits.

For information on participation, outputs, and outcomes, the NIE Outcome Study relied on data primarily from the HPOG Program's management information system, the Performance Reporting System (PRS), and on administrative data on quarterly employment and earnings from the National Directory of New Hires (NDNH). The NIE Outcome Study documented employment and earnings outcomes for HPOG participants, but did not address the question of whether HPOG caused increased employment and earnings for those individuals. The HPOG Impact Study addresses these questions in a separate report. A 15-month follow-up survey of HPOG participants provided information on participant experiences and aspirations. The report also summarizes information presented in the *Descriptive Implementation and Outcome Study Report* from a survey of HPOG grantee representatives to contextualize data on participation experiences and outcomes from the PRS and the NDNH.

Recommendations

Recommendations from the report include:

- Programs like HPOG may want to balance support of short- and long-term training. While the NIE findings show that those in longer-term training had better individual outcomes, programs could serve more low-income individuals in shorter-term training using the same level of grant expenditures. Such an approach may reach a less academically accomplished group with less work experience. (Note that although providing more short-term training may lead to serving more low-income workers, it does not by itself necessarily support career pathways or higher-wage jobs.) Many of those choosing the shorter-term training may have done so out of the need to obtain employment sooner rather than later.
- Given the study's findings that those who completed longer-term training earned higher wages, programs like HPOG should support those in longer-term training while encouraging and creating incentives for those who complete shorter-term training to

return to school and continue on a career pathway. One possible strategy is to increase outreach and recruitment for training of incumbent entry-level healthcare workers, whether HPOG graduates or others. Increasing support for incumbent workers through incentives to return to training and by developing more partnerships with healthcare employers could provide a stronger basis for more individuals to train for higher-paying jobs along their career pathways.

- Programs like HPOG could employ two strategies for program design and implementation in order to lower eligibility standards while increasing participation in healthcare training among academically underprepared individuals. One strategy would be to increase the degree to which programs integrate adult basic education with healthcare training. This approach—one prominent model of which is I-BEST (Integrated Basic Education and Skills Training)—has shown promising results in non-experimental studies and is currently being tested in an experiment as part of OPRE's Pathways for Advancing Careers and Education (PACE) evaluation. A second strategy is to develop program structures that create a close connection or pipeline between basic skills instruction and occupational training.

Glossary

ACF – Administration for Children and Families

HPOG – Health Profession Opportunity Grants

I-BEST – Integrated Basic Education and Skills Training

NDNH – National Directory of New Hires

NIE – National Implementation Evaluation

OPRE – Office of Planning, Research, and Evaluation

PACE – Pathways for Advancing Careers and Education

PRS – Performance Reporting System

TANF – Temporary Assistance for Needy Families

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List of Exhibits

Executive Summary

The Health Profession Opportunity Grants (HPOG) Program provides education and training to Temporary Assistance for Needy Families (TANF) recipients and other low-income individuals for occupations in the healthcare field that pay well and are expected to either experience labor shortages or be in high demand.[a] In 2010, the Administration for Children and Families (ACF) of within the U.S. Department of Health and Human Services awarded the first round of 5-year HPOG grants (HPOG 1.0) to 32 organizations across 23 states. Grantees included government agencies, community-based organizations, post-secondary educational institutions, and tribal-affiliated organizations.[b] HPOG 1.0 grantees served 36,624 individuals over 5 years.[c]

ACF's Office of Planning, Research, and Evaluation (OPRE) is using a multipronged research and evaluation strategy to assess the success of the HPOG Program. The HPOG National Implementation Evaluation (NIE) is part of this strategy and includes the 27 non-tribal HPOG 1.0 grantees. The NIE has three major components: a Descriptive Implementation Study, a Systems Change Analysis, and an Outcome Study. The major research questions for the studies, respectively, were:

- How are health profession training programs implemented across the grantee sites?
- What changes to the service delivery system are associated with program implementation?
- What individual-level outputs and outcomes occur?

In 2016, Abt Associates and its partner, The Urban Institute, published two reports that summarized the findings of the three related studies based on the experience of HPOG through September 2014 (the first 4 years of the 5-year grant period): the *Descriptive Implementation and Outcome Study Report* and *Systems Change under the Health Profession Opportunity Grants (HPOG) Program Report*.[d]

[a] Authority for these demonstrations is included in the Affordable Care Act (ACA), Public Law 111-148, 124 Stat. 119, March 23, 2010, sect. 5507(a), "Demonstration Projects to Provide Low-Income Individuals with Opportunities for Education, Training, and Career Advancement to Address Health Professions Workforce Needs," adding sect. 2008(a) to the Social Security Act, 42 U.S.C. 1397g(a).

[b] A second round of 32 grants ("HPOG 2.0") was awarded in 2015 through extension of the HPOG Program by the Protecting Access to Medicare Act (PAMA) of 2014 (H.R. 4302; Public Law. 113–93, April 1, 2014, Title I Medical Extenders, Section 208, "Extension of Health Workforce Demonstration Project for Low-Income Individuals," Section 2008(c)(1) of the Social Security Act (42 U.S.C. 1397g(c)(1)) is amended by striking "2014" and inserting "2015."

[c] While non-tribal HPOG 1.0 grantees served 36,624 individuals over 5 years, this report includes findings for only a subset of 29,942 participants (82% of all participants) who gave informed consent to participate in research. The sample is described in further detail in the following sections.

[d] Werner, Alan, Robin Koralek, Pamela Loprest, Radha Roy, Deena Schwartz, Ann Collins, and Allison Stolte (2016). *Descriptive Implementation and Outcome Study Report: National Implementation Evaluation of the Health Profession Opportunity Grants (HPOG) to Serve TANF Recipients and Other Low-Income Individuals,* OPRE Report # 2016-30. Washington, DC: Office of Planning, Research, and Evaluation, Administration for Children and Families,

This final report of the HPOG NIE describes the HPOG 1.0 implementation and participant experiences and outcomes through the end of HPOG 1.0 in September 30, 2015.[e] In so doing, it updates and adds to prior findings on HPOG participants and their outcomes presented in the earlier NIE *Descriptive Implementation and Outcome Study Report*. The NIE Outcome Study documented employment and earnings outcomes for HPOG participants, but did not address the question of whether HPOG caused increased employment and earnings for those individuals. The HPOG Impact Study addresses these questions in a separate report.

Key Findings in Brief

In just over 5 years of operation, non-tribal HPOG 1.0 grantees enrolled over 36,000 participants; 29,942, or over 80 percent, consented to be included in the research and have their experiences and outcomes presented in this report. Of those who consented to participate in research, 87 percent engaged in training within 3 years after entering an HPOG program. Of those who began training, 78 percent had completed it by 3 years after entering HPOG; another 5 percent were still in training at that time. The remainder had dropped out. Most of those who completed training had enrolled in relatively short term courses, with an average time to completion of 3.5 months.

By the 12th quarter after enrolling in HPOG, 75 percent of HPOG participants were employed, with average quarterly earnings of $6,200. Those who had completed training were more likely to be employed by the 12th quarter (77%) than those who had not completed a course (68%). Based on a participant follow-up survey fielded at 15 months after enrolling, 58 percent of those with jobs were employed in healthcare, with an average hourly wage of $13.49.

These results show that HPOG was successful in training high numbers of individuals in healthcare occupations, leading to employment in healthcare for many.

How did participants fare in employment and earnings?[f]

All participants (N ranges from 18,820 to 13,382 depending on quarter)

- Three years after enrollment, about 75 percent of participants were employed in a job in any sector, an increase from about 52 percent in the quarter of program entry.
- Participant earnings also increased steadily after enrollment. Average quarterly earnings of employed participants rose from $3,145 at the time of enrollment to $6,200 at 3 years later.

U.S. Department of Health and Human Services. And Bernstein, Hamutal, Lauren Eyster, Jennifer Yahner, Stephanie Owen, and Pamela Loprest, *Systems Change under the Health Profession Opportunity Grants (HPOG) Program* (OPRE Report # 2016-50) (Washington, DC: Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services, 2016).

[e] Note that many HPOG grantees received no-cost extensions from ACF to extend services to individuals still in training on September 30, 2015. Those participants' experiences and outcomes are included in this report.

[f] Employment and earnings data listed here are for those with at least 18 months of post-enrollment experience.

- From 2 years before enrollment to 3 years following enrollment, TANF recipients enrolled in HPOG experienced a 112 percent increase in employment and a 53 percent increase in earnings.

Participants by training completion status[g]

- Participants who had completed at least one training course were almost 10 percentage points more likely to be employed (77%) than those who dropped out before completing training (68%) as of in the 12th quarter after course completion or dropout.
- For those who completed training and were employed, average earnings rose steadily for 3 years after completion. Average quarterly earnings were $4,100 in the quarter of course completion, increasing to $5,400 at 1 year after course completion. For those who dropped out, earnings also increased over the 3 years following leaving the program, but were lower—average earnings for those employed were $3,900 at the time they left the program and $4,300 a year later.

Participants who completed a healthcare course, by occupation

- Quarterly employment and earnings after training completion varied by the occupation for which individuals trained.
- Among the five most common occupations for which participants trained, registered nurses had the highest employment rate and average quarterly earnings for nearly all of the 12 quarters after course completion. At 3 years after completion, those finishing registered nurse training had an employment rate of 92 percent and average quarterly earnings of $13,200. Those training to become a licensed practical and vocational nurse had the second highest employment rate and earnings over the 3 years following completion. Those finishing certified nursing assistant, medical assistant, and medical records/health information technician training had lower employment and earnings than the nursing occupations for all 12 quarters after course completion.

Quality of jobs as reported by employed HPOG participants

- At 15 months after program entry, 73 percent of HPOG participants were employed and 53 percent were employed in healthcare.
- Sixty percent of participants had held a healthcare job at some time during the 15 months following program entry.
- Employed participants reported an hourly wage of $12.99 overall and $13.49 for healthcare jobs.
- Fifty-nine percent of all jobs were full-time, and 63 percent of healthcare jobs were full-time.
- Seventy-two percent of all jobs offered health insurance, and 77 percent of healthcare jobs offered health insurance**.**

[g] The number of course completers with 12 quarters of NDNH data post-completion was 6,089; the number of non-completers with 12 quarters of NDNH data after dropping out was 3,330.

Who participated in the HPOG program?

At program entry (N = 29,942)[h]

- Eighty-eight percent of participants were female and 63 percent were from racial or ethnic minorities.
- Sixty-two percent of participants were parents and 84 percent were unmarried.
- Sixty-five percent of participants had annual incomes below $10,000, 14 percent were receiving TANF cash assistance, and 53 were in households receiving Supplemental Nutrition Assistance Program (SNAP) benefits.
- At the time of program entry, 30 percent of participants were in school and 41 percent were employed.
- The baseline characteristics of all HPOG participants did not vary much over the 5-year grant period.

How did participants fare in educational attainment?

By 18 months after program entry (N = 20,384)

- Eighty-three percent had enrolled in a healthcare training course.
- The average time in training for those who had completed a course was 3.5 months.
- Of those who had completed at least one training course, 37 percent had received a license or a third-party certification.
- Sixteen percent of those who had completed a course had begun at least one additional healthcare training course.

By 36 months after program entry (N = 8,748)

- Eighty-seven percent had enrolled in a healthcare training course.
- Seventy-eight percent of those starting training had completed at least one training course, and only 3 percent were still enrolled 36 months after program entry. The greatest increase in course completions between 18 and 36 months after enrollment was in the longer-term training courses, such as registered nursing.
- The average time in training for those who had completed a course was 5.3 months.
- Of those who had completed at least one training course, 44 percent had received a license or a third-party certification.
- Twenty-one percent of those who had completed a course had begun at least one additional healthcare training course.

[h] All samples in this report are confined to non-tribal HPOG participants who gave consent to be included in the research (82%).

What were participant educational and career aspirations and opinions about HPOG?

Opinions at 15 months following program entry

- Seventy-nine percent expressed their educational goal as an Associate's, Bachelor's, or higher degree, an increase of 11 percentage points from educational goals expressed at program entry.
- Eighty-seven percent either strongly or somewhat agreed with the statement, "I am making progress towards my long-range educational goals."
- Ninety percent either strongly or somewhat agreed with the statement, "I see myself on a career pathway."
- In response to the question, "How much must a job pay per hour for it to make sense for you to take it?" participants indicated an average wage of $12.81, statistically identical to the response given to the same question when asked at program entry.

What are the implications for policy and program design?

- The HPOG Program was successful in training individuals in healthcare occupations, leading to employment in healthcare. Of those who enrolled in HPOG, 87 percent enrolled in healthcare training. Seventy-eight percent of those who had enrolled in healthcare occupational training had completed their training by 3 years after entering HPOG, and another 5 percent were still in training at that time.
- Most participants engaged in short-term training for low-wage entry-level jobs, but a notable proportion (28%) completed longer-term training for higher-paying jobs in nursing. Given the study's finding that those who completed longer-term training earned higher wages, programs like HPOG should support those in longer-term training while encouraging and creating incentives for those who complete shorter-term training to return to school and continue on a career pathway.
- At program entry, only 6 percent of participants did not have a high school diploma or GED and only 15 percent had literacy skills below the eighth-grade level. In order to increase participation among academically underprepared individuals, programs like HPOG would need to make greater investments in basic skills instruction (including adult education) and expect longer average times for course completion.

I. Introduction

The Health Profession Opportunity Grants (HPOG) Program provides education and training to Temporary Assistance for Needy Families (TANF) recipients and other low-income individuals for occupations in the healthcare field that pay well and are expected to either experience labor shortages or be in high demand.[1]

In 2010, the Administration for Children and Families (ACF) of the U.S. Department of Health and Human Services awarded the first round of 5-year HPOG grants (HPOG 1.0) to 32 organizations across 23 states, with approximately $67 million disbursed each year through fiscal year 2015.[2] Twenty-seven of the HPOG 1.0 grantees were post-secondary educational institutions, workforce investment boards, state or local government agencies, and community-based organizations. Five HPOG 1.0 grantees were tribal organizations.

Grantees designed and implemented programs to provide eligible participants with education, occupational training, and employment and support services to help them train for and find jobs in a variety of healthcare professions.

ACF's Office of Planning, Research, and Evaluation (OPRE) is using a multipronged research and evaluation strategy to assess the success of the HPOG Program. The HPOG National Implementation Evaluation (NIE) is part of this strategy and includes the 27 non-tribal HPOG 1.0 grantees. Over 5 years of operation, those non-tribal grantees enrolled 36,624 program participants; of them, 82 percent (29,942) consented to be included in the research and have their experiences and outcomes presented in its reports.

Important Terms for this Chapter

Career pathways—a framework for occupational training that combines education, training, and support services that align with the skill demands of local economies and help individuals to enter or advance within a specific occupation or occupational cluster

HPOG Program—the national HPOG initiative, including all grantees and programs

HPOG grantee—the entity receiving the HPOG grant and responsible for funding and overseeing one or more local programs

HPOG program—a unique set of services, training courses, and personnel; a single grantee may fund one or more programs

HPOG program operator—the lead organization directly responsible for the administration of an HPOG program

HPOG partners—other organizations directly involved in the operations of the HPOG program

HPOG stakeholders—organizations that play no role in program operations but have an interest in the HPOG program's implementation and success

Network—the group of organizations, including HPOG program operators, partners, and stakeholders, that interact to support HPOG program operations

Contextual factors, or "system"—the economic and service delivery environment in which the HPOG program operates

Outputs—the direct results of program activities or services received by HPOG participants and/or the accomplishments associated with completing a service, including GED/diploma, new skills, and industry-recognized credentials

Outcomes—end goals for HPOG participants, including employment and earnings in general and in healthcare specifically

TANF recipient—an individual receiving TANF cash assistance at time of program entry

The NIE has three major components—a Descriptive Implementation Study, a Systems Change Analysis, and an Outcome Study—that address the following three major research questions, respectively:

1. How are health professions training programs being implemented across the grantee sites?
2. What changes to the service delivery system are associated with program implementation?
3. What individual-level outputs and outcomes occur?

In 2016, Abt Associates and its partner, The Urban Institute, completed two related reports that presented the findings of the three NIE studies based on the experience of HPOG through the first 4 years of the 5-year grant period: the *Descriptive Implementation and Outcome Study Report* and *Systems Change under the Health Profession Opportunity Grants (HPOG) Program Report*.[3]

This final report of the HPOG NIE primarily updates findings of the Outcome Study to include results on participation and outcomes for over 9,000 more HPOG participants over an additional 18 months. Additionally, this report provides findings on participant career aspirations and employment characteristics using data from a follow-up survey of HPOG participants, initiated 15 months after enrollment or random assignment. The NIE Outcome Study documented employment and earnings outcomes for HPOG participants, but did not address the question of whether HPOG caused increased employment and earnings for those individuals. The HPOG Impact Study addresses these questions in a separate report.

This chapter begins with a summary of NIE research to date and proceeds with an overview of the rationale, design, and contents of this final report of the NIE.

1.1 NIE Research to Date

This introduction provides important context for this report's findings about participants, their receipt of support services, participation in training, and their employment and earnings outcomes. It includes an overview of HPOG 1.0 program design and operations and changes to local service delivery systems that were associated with program implementation as of 2014. Section 1.1.1 provides a summary of implementation study results from the *Descriptive Implementation and Outcome Study Report*.[4] Section 1.1.2 provides highlights of key findings from the *Systems Change under the Health Profession Opportunity Grants (HPOG) Program* report.[5]

1.1.1 Program Design and Implementation

Who received HPOG 1.0 grants? Who operated programs?

- Most grantees operated a single program with a unique set of services, but four grantees funded multiple programs. Overall, the 27 non-tribal HPOG 1.0 grantees implemented 49 distinct programs.

- On average, HPOG programs collaborated with 19 other partner and stakeholder organizations; partners' contributions included recruitment, occupational training, support services, and employment assistance.

Who was eligible to participate?

- HPOG grantees were required to target TANF recipients (as defined by each state's eligibility rules) and other low-income individuals, but grantees had some discretion to define "low-income." Most programs used the federal poverty level (FPL) to set income eligibility for non-TANF applicants, with a median standard of 200 percent of FPL and a range of 150 percent to 250 percent of FPL.
- Most programs set minimum grade-level literacy and numeracy standards for eligibility. Because many states prohibit persons with criminal records from working in direct patient care, most programs checked for past felonies or misdemeanors and prohibited those with criminal records from participating. Some programs provided training in occupations that do not entail patient contact, such as dental prostheses technicians, allowing them to serve participants with criminal records.
- Most programs also screened applicants in other ways to determine suitability for healthcare training and employment, assessing, for example, their motivation, work ethic, and interpersonal skills.

What healthcare training courses were available?

- Most HPOG programs offered pre-training activities to prepare participants for occupational training; the most common topics were soft skills and introduction to healthcare careers.
- Almost all programs offered occupational training for nursing aides, orderlies, and attendants; other commonly offered courses included those for medical assistants and pharmacy technicians.
- HPOG programs also offered longer-term training courses for higher-wage jobs, such as those for licensed vocational and registered nursing.
- Most programs incorporated career pathways elements into training, such as work-based learning, flexible and accelerated scheduling, stackable credentials, contextualized basic skills, and support services.

What support services were available?

- Almost all programs had case managers. They monitored progress; provided personal, financial, academic, career, and employment counseling; and referred participants to other support services available in the community or through partner agencies.
- Programs provided other academic supports included tutoring, peer support groups, and mentoring.
- Financial support included tuition assistance or waivers; free course materials, supplies, and uniforms; and fee assistance for outside exams, licenses, and certifications.

- Programs also provided personal and family supports (directly or through referral), such as child care and transportation assistance.

What employment assistance was available?

- All programs provided multiple types of employment development and assistance services; the most common were individual job search assistance, career and employment counseling, and job listings.
- In most programs, employer partners played a role, for example, requesting referrals for job openings, placing job lists with programs, and asking programs to screen job candidates.

1.1.2 Systems Change

As part of the service delivery framework for HPOG programs, ACF expected that grantees and program operators would leverage community resources where available and rely on institutional partners to provide some HPOG services and training. In addition, the HPOG 1.0 Funding Opportunity Announcement (FOA) specified that program operators were required to partner with state and local workforce investment boards (WIBs) and state apprenticeship and TANF agencies, unless the grant recipient represented one of these entities. In fact, in addition to providing many services directly themselves, program operators used institutional partners and other community resources to provide core program services or courses. The systems change analysis focused on understanding the 49 unique HPOG 1.0 programs' partnerships with multiple organizations, including partners' roles in the program and the relationship between partners.

The following provides highlights of key findings from the full study reported in *Systems Change Analysis under the Health Profession Opportunity Grants (HPOG) Program.*

What institutions were HPOG partners and stakeholders?

- Approximately half of the HPOG networks (25 of 49) included five types of institutions: (1) educational or training organizations, (2) workforce development agencies, (3) other government agencies, (4) non-profit organizations, and (5) business organizations (including healthcare employers).
- The HPOG 1.0 FOA specified that program operators were required to partner with state and local WIBs and state apprenticeship and TANF agencies, unless the grant recipient represented one of these entities. Nearly all networks (48) included state or local WIB or One-Stop partners, which were required partners. Fifty-nine percent (29) included state apprenticeship agencies, and 63 percent (31) included state or local TANF agencies. Slightly less than half—23 of 49 networks—included all three types of required partners.
- Most relationships between program operators and partners or stakeholders existed before the HPOG Program, but two-thirds of networks (32) included at least one new working relationship established during the grant period.

What contributions did partners and stakeholders make to HPOG programs?

- Partners and stakeholders most commonly engaged in referral and outreach activities (81% on average), two-thirds (66%) provided training activities, and nearly two-thirds (64%) provided employment assistance. Over half (57%) provided counseling and support activities. About a third (35%) helped with planning and design of grant activities. Most partner organizations in the HPOG networks played multiple roles.
- In 94 percent of networks (45), partners provided additional resources to supplement those covered by the grant funding.

Did HPOG programs and networks strengthen their collaboration over the grant period?

- Collaboration across different types of organizations in the networks increased over time, connecting across service areas between education and training organizations, workforce development agencies, other government agencies, non-profit organizations, business-sector organizations and employers, and other types of organizations.

Did HPOG affect healthcare training and support systems for low-income populations in their communities?

- A majority of employers hiring HPOG job candidates reported they were better than other applicants on areas related to skills and job performance. Two-thirds agreed that the HPOG programs effectively filled jobs and produced graduates with needed healthcare skills.
- Most program operators reported HPOG programs expanded healthcare training opportunities for low-income populations; program operators felt more training opportunities were more often widely available during the HPOG Program than before the Program.
- Most partners and stakeholders felt that the HPOG programs achieved systems change objectives, most commonly reporting that HPOG programs helped clearly define healthcare career pathways (59% on average).

What was the overall experience of HPOG network members?

- Most network partners and stakeholders felt that network members collaborated well.
- Most network partners and stakeholders were positive about the value of other organizations' contributions to HPOG programs. Most network members planned to continue to collaborate with program operators and other organizations on healthcare training and support services.
- Network members generally did not anticipate serious challenges to sustaining collaboration.

What are the implications for policy and research?

- The high degree of collaboration across types of organizations within networks and the wide range of organizations involved are promising, as it may have increased the likelihood that participants received the services they needed. These patterns also

support the potential for training and support providers and employers to maintain beneficial working relationships after the HPOG grant period ends.

- While a diverse set of organizations participated in the HPOG networks, collaborations with healthcare employers could have been stronger. Although the HPOG programs generally responded to employer demand, future efforts should encourage greater employer involvement.
- The study analysis regarding which network features (size of network, inclusion of required partners, number of employers, and whether program existed prior to HPOG) were associated with stronger collaborative performance found no clear patterns. Future healthcare education and training programs for low-income adults should explore how these features may be linked to stronger network collaboration, as well as to improved participant outcomes.

1.2 Goals of this Report

This final report of the HPOG NIE describes program implementation and participant experiences and outcomes through the end of HPOG 1.0 in September 30, 2015.[6] In so doing, it updates and adds to prior findings on HPOG program implementation and participants and their outcomes presented in the earlier NIE *Descriptive Implementation and Outcome Study Report*.

This final report includes:

- Characteristics at enrollment for all participants from the start of the HPOG 1.0 Program (September 30, 2010) through its end (September 30, 2015)
- Pre-training activities, training courses, and support services available to HPOG participants

HPOG NIE Data Sources

HPOG Performance Reporting System (PRS)—the HPOG 1.0 management information system for documenting participant characteristics, program experiences and outcomes

National Directory of New Hires (NDNH)—(maintained by the ACF Office of Child Support Enforcement) providing data on quarterly earnings from state Unemployment Insurance records

15-month follow-up survey of HPOG participants—a survey initiated at 15 months after program enrollment or random assignment that collected more detailed and complete data about participant program experiences and satisfaction, as well as preliminary labor market outcomes for individuals in shorter-term training

Grantee survey—a survey that collected comprehensive and comparable data across all grantees regarding program administration, context and available activities, training courses and support services

Management and Staff survey—a survey focused on HPOG personnel who interacted with participants directly or by supervising those who did; the survey collected information on management and staff backgrounds, responsibilities, implementation strategies and opinions

Stakeholder/Network survey—a survey focused on institutions identified as HPOG partners or stakeholders who were well informed about HPOG implementation; the survey collected information about HPOG program engagement and involvement, services provided, collaboration, and sustainability

Employer survey—a survey that collected information about relevant local employers' knowledge of, interactions with, and opinions about the HPOG program and its participants

- Program experiences and training outcomes for participants at 18 months after enrollment
- Program experiences and training outcomes for a sample of participants at 36 months after enrollment
- Quarterly employment and earnings outcomes from the National Directory of New Hires (NDNH) for 12 quarters after enrollment[7]
- Characteristics of participants' jobs from the 15-month follow-up survey of HPOG participants
- Participant experiences and aspirations from the 15-month follow-up survey of HPOG participants[8]

The results for the sample of participants with at least 18 months of experience since enrollment (referred to hereafter as the 18-month sample) presented in this report differ from the 18-month sample results presented in the prior NIE report. This report draws upon Performance Reporting System (PRS) data for participants who enrolled from September 30, 2010 through April 1, 2014. In contrast, the 18-month sample in the prior NIE report included only those who had enrolled through April 1, 2013. This report's 18-month sample includes 7,770 more participants than the 18-month sample in the prior NIE report (see Appendix A). The sample for the 15-month follow-up survey was drawn from participants who enrolled between September 30, 2013 and September 30, 2014, to coincide roughly with the period during which the NIE collected information about HPOG 1.0 programs' operations and services.

This report also presents findings for the sample of participants with at least 36 months of experience since enrollment (hereafter referred to as the 36-month sample). The rationale for providing results for this sample is to report training completion outcomes after a longer period post-enrollment. This is important for a more comprehensive view of training completion, since the prior NIE report showed that a meaningful number of participants were still in a healthcare training 18 months after enrollment. At the time of the last report, the sample of participants with 36 months post-enrollment was too small to present reliable outcomes. This report is able to present results for a larger 36-month sample.[9]

In this final report, we first share participant quarterly employment and earnings outcomes at up to 12 quarters (3 years) after program enrollment and characteristics of HPOG participant jobs at 15 months after enrollment. This is followed by chapters on:

- HPOG participant characteristics for all of those enrolled between September 2010 and September 2015
- Pre-training and training courses and support services available and provided to participants by 18 and 36 months after program enrollment
- Participant education outcomes at 18 and 36 months after enrollment
- Participant self-reported experiences and aspirations at approximately 15 months after enrollment

2. Participant Employment and Earnings Outcomes

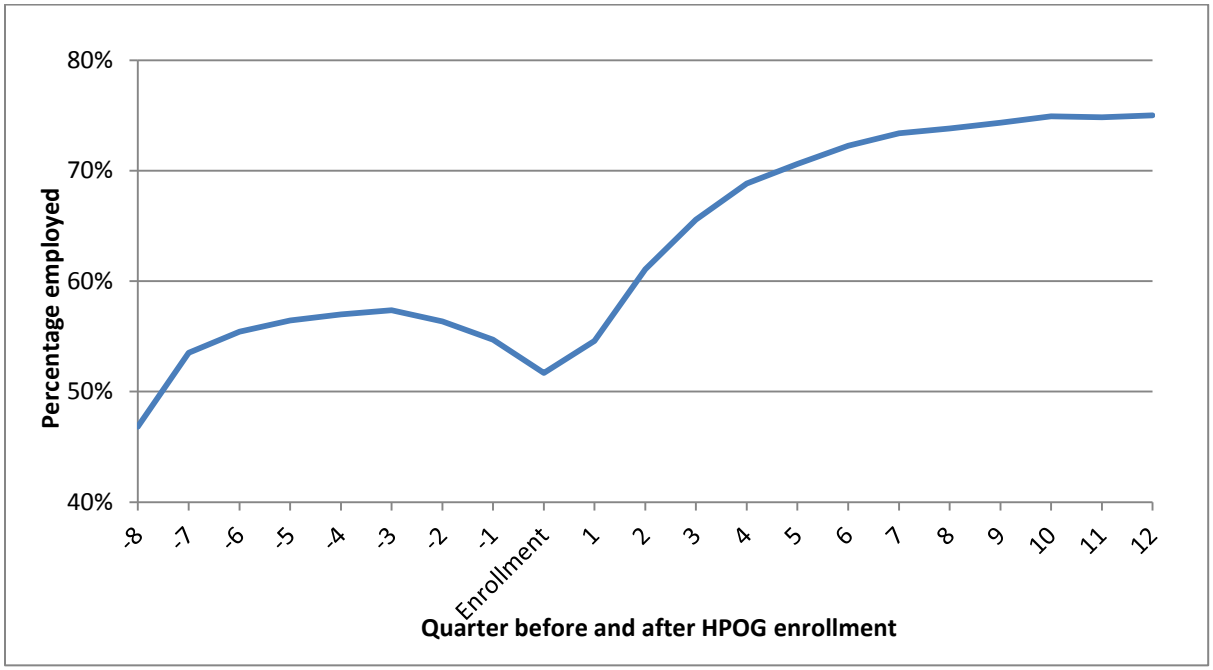
One of HPOG's primary goals is to increase employment in the healthcare industry among participants. This chapter presents findings on the quarterly employment and earnings outcomes of HPOG participants using data from the NDNH. Findings in this report are based on up to 3 years (12 quarters) of data after enrollment and 2 years (8 quarters) prior to enrollment. This chapter reports results using the 18-month sample of participants. This allows analysis of employment and earnings over the same period but for a larger sample than in the *Descriptive Implementation and Outcome Study Report.* Trends in quarterly employment and earnings for the 36-month sample are very close to those for the 18-month sample, so this chapter only shows findings for the 18-month sample.[10] See Appendix B for results for both samples. In addition, this chapter reports findings about the quality of jobs held by HPOG participants at 15 months following enrollment based on responses to the 15-month follow-up survey of HPOG participants.

The results show employment and earnings of HPOG participants increased over time after enrollment and were higher than employment and earnings had been for up to 2 years prior to enrollment. Participants who completed a healthcare training course showed larger increases than those who dropped out or failed to complete a training course. Participants who completed longer training courses saw larger increases in employment and earnings than those who completed shorter courses, although all who completed training saw increases relative to pre-enrollment. Almost all subgroups of participants increased employment and earnings post-enrollment, as well.

2.1 Employment and Earnings by Quarter

The **percentage of employed HPOG participants in the 18-month sample increased steadily in the quarters after HPOG enrollment**, from 52 percent employed in the quarter of enrollment to 75 percent employed 3 years after enrollment (Exhibit 2-1).[11] By the second quarter post-enrollment, the percentage employed surpassed any of the eight pre-enrollment quarters examined. Employment levels continued to rise until the 10th quarter (2.5 years) after enrollment and then remained stable.[12]

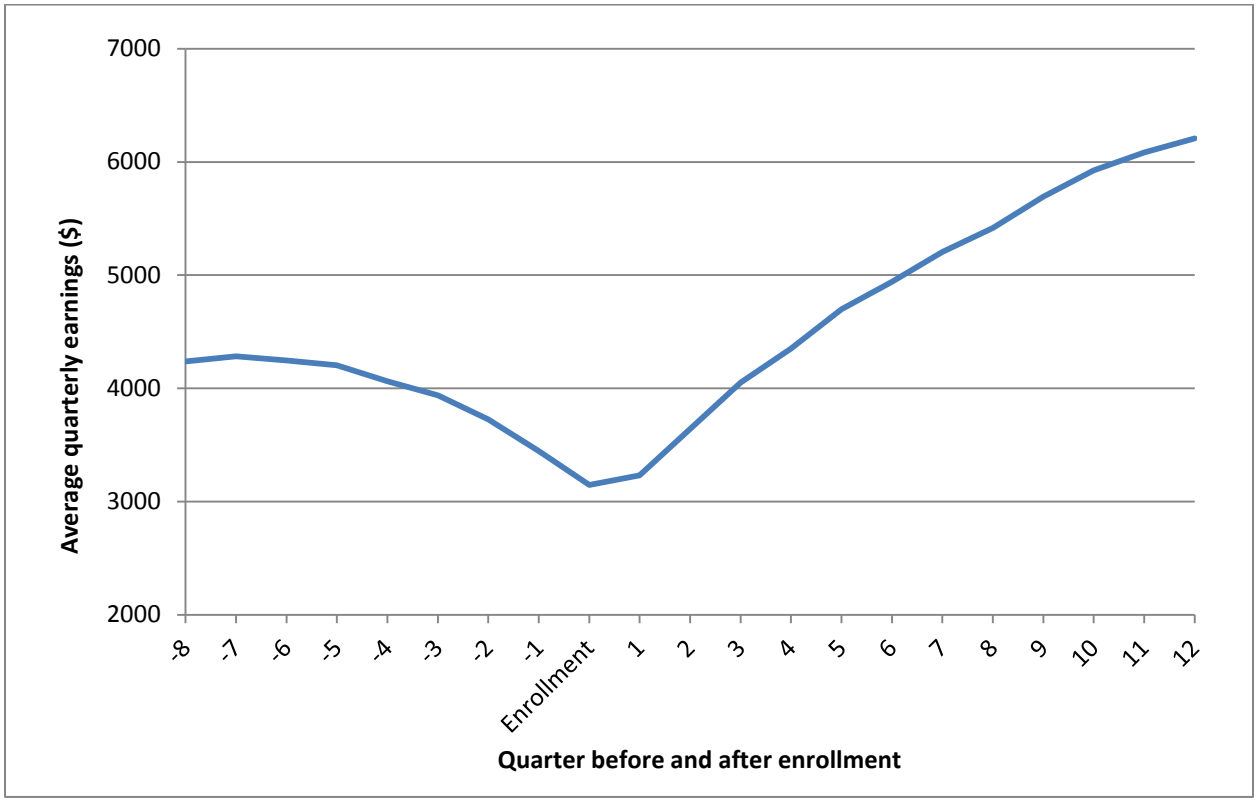
Exhibit 2-1. Employment of HPOG Participants, by Quarter (18-month Sample)



Notes: Sample includes participants with at least 18 months of post-enrollment experience (enrolled by April 1, 2014). N ranges from 18,591 8 quarters prior to enrollment, to 19,765 the quarter of enrollment, to 16,502 in the final quarters post-enrollment.
Source: NDNH.

Participant earnings also increased steadily after enrollment (Exhibit 2-2). Average earnings of employed participants rose from $3,145 in the quarter of enrollment to $6,208 in the 12th quarter after enrollment.[13] By the fourth quarter after enrollment, average earnings were higher than average earnings in all pre-enrollment quarters.

Exhibit 2-2. Earnings of Employed HPOG Participants, by Quarter (18-month Sample)



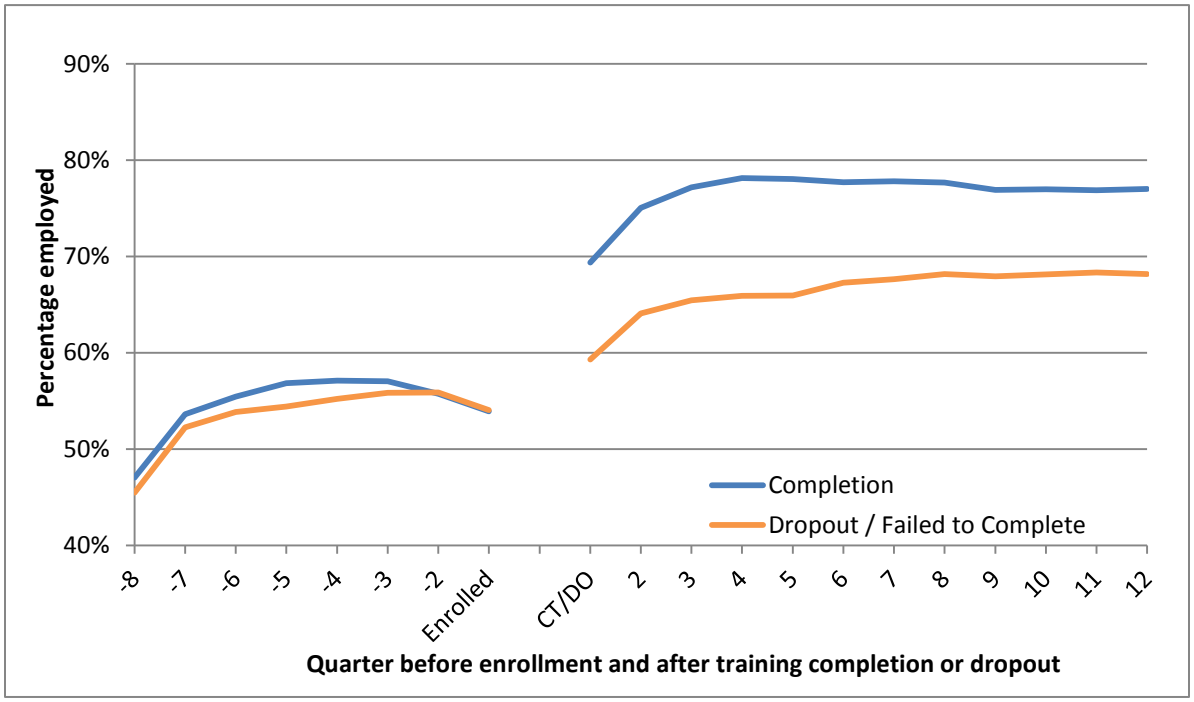
Notes: Sample includes participants with at least 18 months of post-enrollment experience (enrolled by April 1, 2014) who were employed in a given quarter.
N ranges from a low of 8,074 to a high of 14,808.
Source: NDNH.

2.2 Employment and Earnings after Training Completion

In addition to employment and earnings increasing for all participants, results show that **employment and earnings were higher in the quarters after enrollment for participants who completed a training course than for those who dropped out or failed to complete a training course**. Participants are considered to have dropped out if they did not successfully complete at least one training course, indicating that they either didn't complete, failed, or never enrolled in a training course.

Exhibit 2-3 shows employment in the 8 quarters before HPOG enrollment and in the 12 quarters after training completion. For comparison, the exhibit also presents employment for those who dropped out or failed to complete a training course.[14] **Both groups of participants saw employment increases after training completion or dropout relative to employment prior to enrollment.** Employment prior to enrollment was similar for both groups. The highest percentage employed in any quarter prior to enrollment was 57 percent for those who eventually completed a training course and 56 percent for those who dropped out or failed to complete a training course. The percentages employed in the quarter of completion and dropout were 69 percent and 59 percent, respectively.

Exhibit 2-3. Employment of Participants in Quarters before Enrollment and after Training Completion or Dropout (18-month Sample)



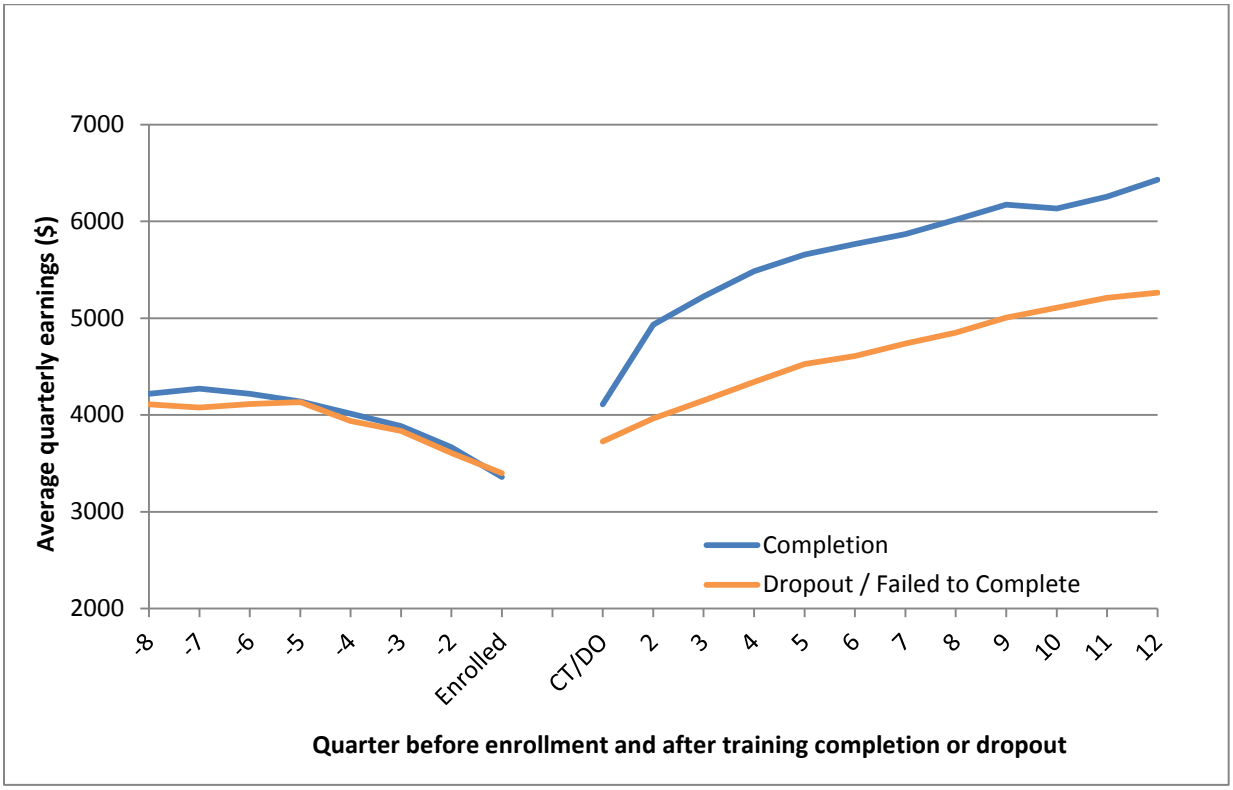
Notes: Sample includes participants with at least 18 months of post-enrollment experience (enrolled by April 1, 2014) who had completed training or failed to complete training. CT stands for quarter completed training and DO stands for quarter dropped out of training.
N ranges from 11,983 to 9,928 for those who completed training and 5,810 to 4,871 for those who dropped out.
Source: NDNH.

In subsequent quarters, **participants who completed a training course had higher employment rates compared to participants who dropped out of or failed to complete a training course**. For example, in the 12th quarter after completing training or dropping out, employment for those who completed training was 77 percent compared to 68 percent for those who did not complete training. However, there may be other differences across these two groups that could influence outcomes for training completion and employment. This finding, therefore, cannot be interpreted as causal evidence that training completion alone was the reason for training completers' higher rate of employment.[15]

Average quarterly earnings for those employed increased steadily after training completion. Exhibit 2-4 shows quarterly earnings of HPOG participants who completed training for the 8 quarters before enrollment and the 12 quarters after completing training. Quarterly earnings continued to grow steadily for both groups from the quarter of completion or dropping out through the 12th quarter, with those who completed training maintaining higher earnings on average.[16] From the quarter of enrollment to the 12th quarter after training completion, average earnings for those who completed training had increased by almost 50 percent, from $3,359 to $6,433. For comparison, earnings for those who dropped out or failed to complete training also increased steadily, but were substantially lower. From the quarter of enrollment to

the 12th quarter after dropping out, average earnings for this group increased by about 35 percent from $3,401 to $5,263.

Exhibit 2-4. Earnings of Participants in the Quarters before Enrollment and after Training Completion or Dropout (18-month Sample)



Notes: Sample includes participants with at least 18 months of post-enrollment experience (enrolled by April 1, 2014) who had completed training or failed to complete training and were employed in a given quarter. CT stands for quarter completed training and DO stands for quarter dropped out of training.
N ranges from 9,283 to 5,310 for those who completed training and 3,957 to 2,518 for those who dropped out or failed to complete.
Source: NDNH.

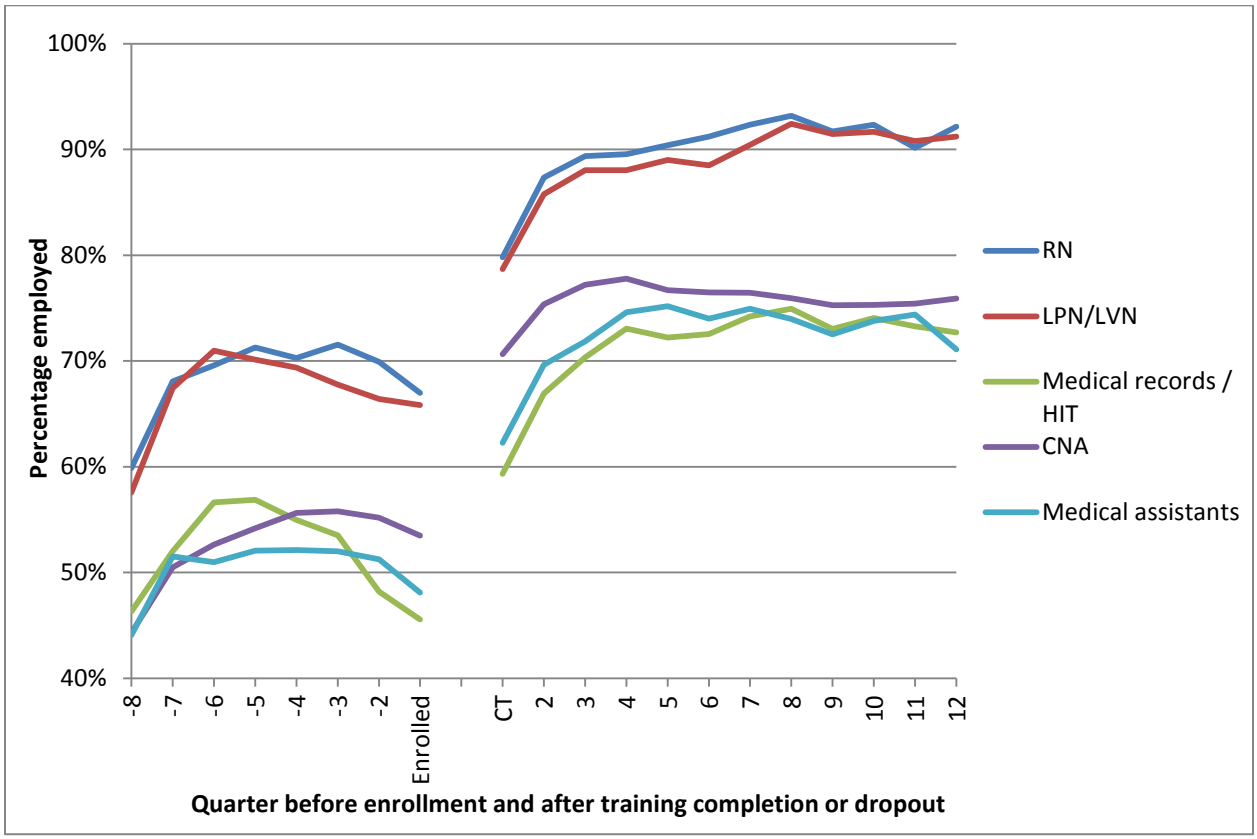
2.3 Employment and Earnings by Occupational Training

HPOG participants engaged in many different healthcare occupational training courses (Chapter 4). Participants had different employment and earnings outcomes depending on the training course(s) completed. Exhibit 2-5 shows average participant employment in the 8 quarters prior to enrollment and the 12 quarters after training completion for the five most common training courses in the HPOG Program.

Participants who completed training to become a registered nurse (RN) had the highest average employment of the five most common healthcare trainings. At 12 quarters after completion, 92 percent of RN training completers were employed. The next highest rate of employment was for those who completed licensed practical and vocational nurse (LPN/LVN) training, with 91 percent employment in the 12th quarter after completion. Of those completing certified nursing assistant (CNA) training, medical records and health information

technician (HIT) training, and medical assistant training, 76, 73, and 71 percent were employed, respectively. Participants who completed trainings with longer average durations tended to have higher levels of employment.

Exhibit 2-5. Employment of Participants in the Quarters before Enrollment and after Training Completion for the Five Most Common HPOG Healthcare Trainings (18-month Sample)



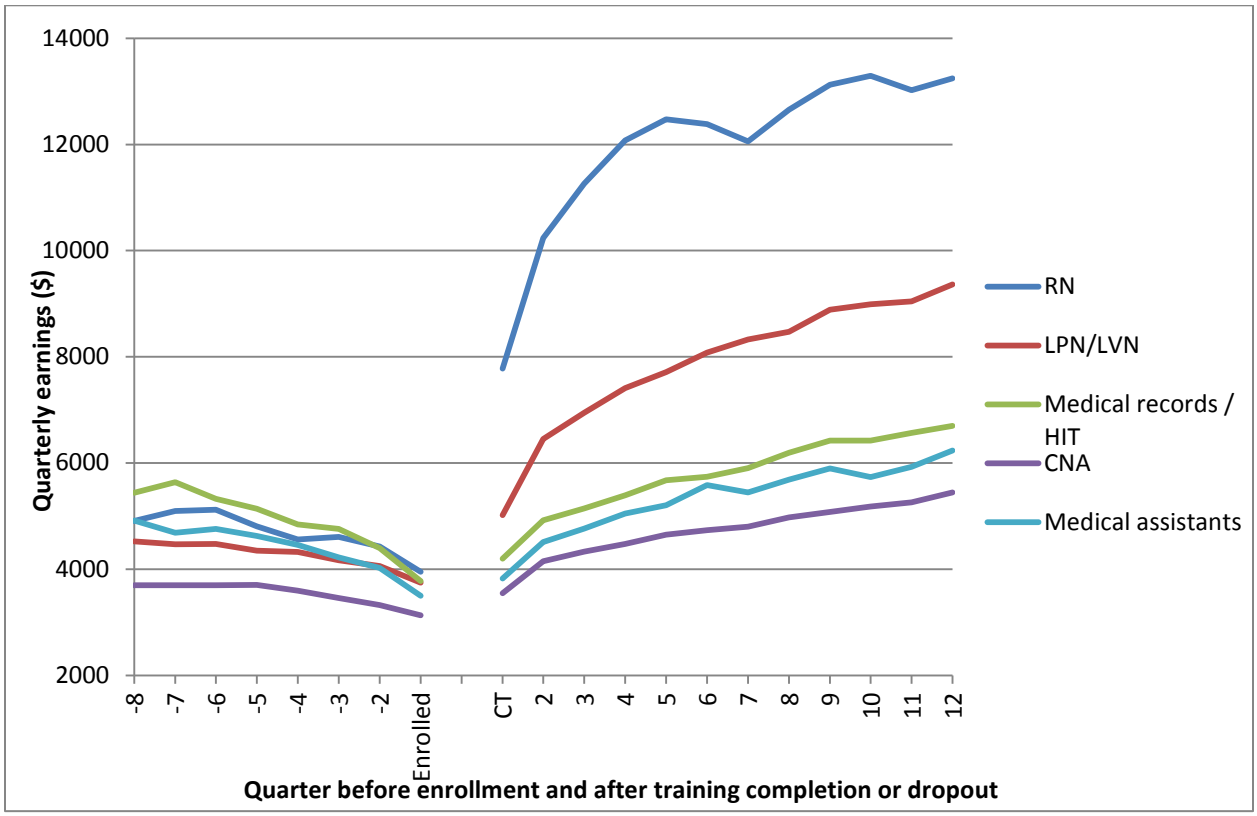
Notes: Sample includes participants with at least 18 months of post-enrollment experience (enrolled by April 1, 2014). N ranges from 6,123 to 255 for those who completed different healthcare training.
Source: NDNH.

Compared to pre-enrollment rates of employment, all participants who completed training courses saw increases in employment. For example, 56 percent of those who completed CNA training were employed in the fourth quarter prior to enrollment. In the 12th quarter after completion, 76 percent were employed. For each of the most common occupations, rates of employment were relatively flat from the fourth to 10th quarter after completion.[17]

Average quarterly earnings increased after training completion for all of the five most common occupational trainings, but varied depending on which training was completed (Exhibit 2-6). Participants who completed an RN training course had substantially higher average quarterly earnings than the other four occupations. Those who completed an RN course earned on average $13,247 in the 12th quarter after training completion, more than twice the average earnings of those who completed CNA training ($5,448 in the 12th quarter after training completion). Participants who completed an LPN/LVN training course also earned on average substantially more than those who completed any of the three lower-level training

courses. In the 12th quarter after completion LPN/LVN completers earned $9,361 on average, medical records and HIT completers earned $6,700, and medical assistant completers earned $6,237.

Exhibit 2-6. Quarterly Earnings before Enrollment and after Training Completion for the Five Most Common HPOG Healthcare Trainings (18-month Sample)



Notes: Sample includes participants with at least 18 months of post-enrollment experience (enrolled by April 1, 2014) who have completed the particular course and were employed in the given quarter.
N ranges from 4,727 to 235 for those who completed different healthcare training.
Source: NDNH.

Earnings increased steadily for each of the five most common training courses from the quarter of training completion to the 12th quarter after training completion. However, for the first 4 quarters after completing medical records/HIT or medical assistant training, participants' average earnings were lower than pre-enrollment earnings. Exhibit 2-7 shows the change in percentage employed and average earnings of those employed for completers of each type of training course from 8 quarters prior to enrollment to 12 quarters after completion. Participants who completed RN and LPN/LVN training courses tended to have higher average rates of employment prior to enrollment in HPOG, perhaps reflecting the higher initial qualifications (such as higher academic skill levels and prerequisite courses in biology) needed to enter those courses. Average earnings 8 quarters pre-enrollment are generally between $4,500 and $5,000. However, those who go on to complete CNA training have lower earnings pre-enrollment, and those who take medical records/HIT have somewhat higher earnings.

Exhibit 2-7. Changes in Employment and Earnings for Five Most Common Training Courses (18-month Sample)

Healthcare Training Occupation	Percentage Employed			Average Quarterly Earnings		
	Quarter 8 before Enrollment	Quarter 12 after Training Completion	Relative Change (pp)	Quarter 8 before Enrollment	Quarter 12 after Training Completion	Relative Change (pp)
Registered nurse	60%	92%	54	$4,910	$13,247	170
Licensed practical and vocational nurse	58%	91%	58	$4,522	$9,361	107
Medical records/health information technology	46%	73%	57	$5,437	$6,700	23
Certified nursing assistant	44%	76%	71	$3,695	$5,448	47
Medical assistant	44%	71%	61	$4,912	$6,237	27

Notes: Sample includes participants with at least 18 months of post-enrollment experience (enrolled by April 1, 2014) who have completed different healthcare training. Earnings are for those employed in the given quarter.
N ranges from 6,123 to 215.
Source: NDNH.

2.4 Employment and Earnings by Participant Characteristics

Employment rates for those participating in HPOG differed by participant characteristics measured at program enrollment. Exhibit 2-8 shows employment and earnings (for those employed) in the eighth quarter prior to and 12th quarter after enrollment. **All subgroups increased employment over this period** by at least 47 percent. Over the same period, **all subgroups also increased average earnings**, with an increase of 25 percent or more. TANF recipients, a target population of the HPOG Program, experienced a 112 percent increase in employment and 53 percent increase in earnings over this period.

Exhibit 2-8. Changes in Employment and Earnings by Participant Characteristics at Enrollment (18-month Sample)

Characteristic	Percentage Employed			Average Quarterly Earnings		
	Quarter 8 before Enrollment	Quarter 12 after Enrollment	Relative Change (pp)	Quarter 8 before Enrollment	Quarter 12 after Enrollment	Relative Change (pp)
Age at Enrollment						
24 and under	43%	73%	71	$2,479	$5,459	120
25 and older	49%	73%	49	$5,027	$6,630	32
TANF						
Yes	32%	68%	112	$3,142	$4,804	53
No	47%	77%	65	$4,184	$6,407	53
In-school Status at Enrollment						
In school	48%	79%	63	$4,149	$7,363	77
Not in school	47%	74%	59	$4,187	$5,575	33
Employment Status at Enrollment						
Employed	56%	84%	50	$3,927	$6,865	75
Not employed	42%	69%	63	$4,571	$5,789	27
Education Level at Enrollment						
Less than 12th grade	35%	67%	93	$3,651	$4,830	32
High school equivalency or GED	44%	69%	55	$4,184	$5,231	25
High school graduate	44%	77%	75	$3,926	$5,648	44
1-3 years of college/technical school	52%	77%	47	$4,291	$6,882	60
4 years or more of college	50%	77%	56	$5,803	$8,707	50

Notes: Sample includes participants with at least 18 months of post-enrollment experience (enrolled by April 1, 2014) and with non-missing responses for each enrollment metric. Percentages missing range from 0 to 9 percent, depending on the metric. Earnings are for those employed in the given quarter.
N ranges from 764 to 11,486 depending on the characteristic at enrollment .
Source: NDNH.

The subgroups with the largest increases in employment were those receiving TANF and those with less than 12th grade education at HPOG enrollment. Those subgroups that experienced the highest increases in average quarterly earnings were those ages 24 and younger and those already in school at enrollment. Finally, each educational attainment subgroup experienced gains in employment and earnings. For those with higher education at enrollment, employment and earnings were highest in the 12th quarter after enrollment.

2.5 Characteristics of Jobs

NDNH data used above to report on quarterly employment and earnings do not include information about the characteristics of jobs, including whether the job was in the healthcare sector, hourly wage, hours of employment, and availability of health insurance coverage. To fill this gap, the study collected data on employment and job characteristics for a sample of participants from the 27 non-tribal HPOG 1.0 grantees who responded to a follow-up survey initiated 15 months after enrollment. This sample overlaps with but is different from the 18-month sample used above. The sample for the findings presented in this section is 4,646 participants who enrolled in HPOG between September 1, 2013 and September 30, 2014,

and who responded to the follow-up survey. This section provides findings on job characteristics for those employed based on these data.[18] Exhibit 2-9 shows employment status 15 months after enrollment and at any time during the 15-month period.

Exhibit 2-9. Participant Employment, 15 Months after Enrollment

	At 15th Month		Any time in 15 Months	
	Number	Percentage	Number	Percentage
Employed	3,369	73	4,060	88
Employed in healthcare	2,429	53	2,771	60

Notes: Sample is 4,646 participants across all HPOG 1.0 grantees who enrolled in HPOG between September 1, 2013 and September 30, 2014, and responded to the 15-month follow-up survey of HPOG participants.
Missing responses for each survey item range from 6-11.
Sources: 15-month follow-up survey of HPOG participants and 15-month follow-up survey of PACE participants.

Almost three-quarters of survey respondents (73%) reported being employed at 15 months after enrollment. This is similar to the 71 percent employed in the fifth quarter after enrollment observed for the 18-month participant sample in the NDNH data (Exhibit 2-1 above). The survey data allow us to determine if these jobs are in the healthcare sector, either in a healthcare occupation or with a healthcare employer. Of all survey respondents, 53 percent were employed in healthcare (over two-thirds of those employed). Note that at 15 months after enrollment some participants had finished training and were no longer in the HPOG program, while others were still in training or receiving services. When considering work at any time over the course of enrollment in HPOG through 15 months, 88 percent of participants were employed; 60 percent of participants were employed in healthcare.

Another goal of HPOG was for participants to secure high-quality jobs as measured by average hourly wage, full-time hours, and availability of employer-based health insurance (Exhibit 2-10). Participants employed at 15 months after enrollment reported an average hourly wage of $12.99. Those employed in healthcare jobs reported earning almost $2 more an hour than those employed in non-healthcare jobs ($13.49 compared with $11.71).

Exhibit 2-10. Job Characteristics of Employed Participants, 15 Months after Enrollment

	All Jobs (N= 3,369)	Healthcare Jobs (N=2,429)	Non-healthcare Jobs (N=940)
Average hourly wage	$12.99	$13.49	$11.71
Average hours per week	34	35	32
Full-time (35+ hours/week)	59%	63%	51%
Job offers health insurance, all jobs	72%	77%	58%
Job offers health insurance, full-time jobs	83%	85%	76%

Notes: Sample is 4,646 participants across all HPOG grantees who enrolled in HPOG between September 1, 2013 and September 30, 2014, and responded to the 15-month follow-up survey of HPOG participants. Healthcare jobs include healthcare occupations or healthcare employer. Average hourly wage is among those reporting wages.
Sample for whether job offers health insurance is 4,402 (does not include participants enrolled at HPOG programs participating in PACE). The number of participants missing/refused response ranges from 21 to 125.
Sources: 15-month follow-up survey of HPOG participants and 15-month follow-up survey of PACE participants.

The average hours worked per week for those employed was 34, just below the 35-hour threshold for what is typically considered full-time work. Average hours worked per week was only slightly higher for healthcare jobs (35 hours) than for non-healthcare jobs (32 hours). Of participants with healthcare jobs, 63 percent worked full-time (35+ hours per week); while 51 percent of those in non-healthcare jobs worked full-time.

Finally, the majority of survey respondents' jobs offered health insurance. For all employed survey respondents, 72 percent held jobs that offered health insurance. This rate was much higher for those in healthcare jobs (77%) than in non-healthcare jobs (59%). Of those employed full-time, 83 percent held jobs that offered health insurance and again the rate was higher for those in healthcare jobs (85%) than in non-healthcare jobs (76%).

3. HPOG Program Participants

In the HPOG 1.0 Funding Opportunity Announcement, ACF required that prospective grantees serve TANF recipients and other low-income individuals, but allowed grantees some discretion in defining "low-income."[19] In addition to setting income limits, grantees also had to make decisions about who among the target population could most benefit from and was likely to succeed in HPOG and subsequent employment in the healthcare industry. In pursuing that goal, HPOG grantees developed eligibility criteria based on program applicants' financial and benefit receipt status, academic achievement and ability, criminal background, and personal characteristics.

HPOG grantees' decisions about eligibility criteria, as well as about whom to target for recruitment from among the eligible population, helped determine the types of individuals participating in HPOG. Exhibit 3-1 summarizes demographic characteristics for all HPOG participants at program entry who enrolled in the program and consented to participate in research. Therefore, the findings in this chapter are for a larger sample than those with at least 18 or 36 months of post-enrollment data (see Appendix A).

The majority of participants (88%) were female.[20] Equal proportions of participants were white non-Hispanic and black non-Hispanic (37% each). Participants were generally young, with close to half in their 20s and another 8 percent younger than 20. Eighty-four percent were single (63% had never married and the remainder were divorced, widowed, or separated). **Almost two-thirds of participants had dependent children**. Fewer than 4 percent fell into any of the following groups (not shown in exhibit): veterans, people with a disability, foster children, people experiencing homelessness, people with limited English skills, and individuals with criminal backgrounds (not shown in exhibit).

HPOG served individuals with diverse educational backgrounds, ranging from those who did not complete high school to those with multiple years of college. At program entry, the majority of HPOG participants had no post-secondary education. Six percent had less than a 12th-grade education, 13 percent had a high school equivalency certificate or GED, and 37 percent had a high school diploma. However, more than one-third (38%) had some years of college or technical school, and 7 percent had 4 or more years of college. As described above, most HPOG programs assessed participants at eligibility determination or enrollment for their levels of literacy and numeracy.[21] Of participants who completed these assessments, 15 percent had less than eighth-grade literacy skills, and 26 percent had less than eighth-grade numeracy skills.

Some participants were in school or working when they started HPOG. Almost one-third of participants (30%) were in school at time of program entry. Forty-one percent of participants were working when they enrolled in the program (15 percent worked in a healthcare occupation and 16 percent for a healthcare employer, not shown in exhibit).

Exhibit 3-1. Demographic Characteristics of HPOG Participants at Enrollment

Characteristic	Number of Participants	Percentage of Participants
Gender		
Male	3,434	12
Female	26,492	88
Race/Ethnicity		
White non-Hispanic	10,993	37
Black non-Hispanic	10,857	37
Hispanic/Latino, any race	5,776	20
Asian or Hawaiian, Pacific Islander	973	3
Native American or Alaska Native	206	1
Two or more races, non-Hispanic	778	3
Age		
<20	2,494	8
20–29	13,578	45
30–39	7,036	24
40–49	4,119	14
50+	2,615	9
Marital Status		
Married	4,690	16
Never married	18,082	63
Divorced, widowed, or separated	5,991	21
Dependent Children		
Yes	17,823	62
No	10,854	38
Highest Educational Attainment		
Less than 12th grade	1,736	6
High school equivalency or GED	3,677	13
High school graduate	10,721	37
1-3 years of college/technical school	10,990	38
4 years or more of college	2,050	7
Literacy at Eighth Grade or Higher		
Yes	21,051	85
No	3,657	15
Numeracy at Eighth Grade or Higher		
Yes	17,640	74
No	6,304	26
Currently in School		
Yes	8,512	30
No	19,570	70
Currently Employed		
Yes	12,175	41
No	17,532	59

Notes: Sample is all 29,942 HPOG participants who enrolled in HPOG, consented to participate in research, and were in the PRS as of September 30, 2015. Percentages are of non-missing responses at enrollment.
Missing: Literacy and numeracy are missing in 17 and 20 percent of responses, respectively, which include those participants for whom these skills were not tested at enrollment. For all other characteristics, missing responses range from 0 to 7 percent.
Source: PRS, 2015.

As would be expected given the requirement to serve low-income individuals, **HPOG participants had low individual and household incomes** (Exhibit 3-2). Almost two-thirds (65%) had individual annual incomes of less than $10,000, and almost half (47%) were in households with incomes under $10,000. To put these income levels in context, the poverty line in 2014 was $11,670 for a one-person household and $19,790 for a household of three.[22] Fourteen percent of participants were receiving TANF cash assistance at program enrollment, and more than half (53%) were receiving SNAP benefits. Almost half were single mothers (44%, not shown in exhibit),[23] many of whom were likely eligible or nearly eligible for TANF cash assistance.

Exhibit 3-2. Income and Benefit Receipt of HPOG Participants at Enrollment

Characteristic	Number of Participants	Percentage of Participants
Individual Income		
<$10,000	17,980	65
$10,000–$19,999	6,316	23
$20,000–$29,999	2,537	9
$30,000+	776	3
Missing	2,333	
Household Income		
<$10,000	12,014	47
$10,000–$19,999	7,157	28
$20,000–$29,999	3,857	15
$30,000+	2,777	11
Missing	4,137	
Receiving TANF		
Yes	3,973	14
No	24,506	86
Missing	1,463	
Receiving SNAP		
Yes	15,270	53
No	13,597	47
Missing	1,075	

Notes: Sample is all 29,942 HPOG participants in the PRS as of September 30, 2015. Percentages are of non-missing responses at enrollment.
Missing: Missing responses range from 4 to 14 percent.
Source: PRS, 2015.

The next chapter discusses program experiences, focusing on participants' take-up of HPOG pre-training and training opportunities, as well as their use of support and employment services.

4. Participation in Healthcare Pre-Training Activities and Basic Skills Education

The HPOG Program logic model[24] predicts that participants will achieve desired educational and employment outcomes if they engage in and complete healthcare occupational training. Available program preparatory ("pre-training") activities, training courses, and support services are hypothesized to assist participants in completing courses.[25] This chapter summarizes both the opportunities that HPOG programs offered and the degree to which participants took advantage of those opportunities by enrolling in pre-training activities and training and receiving support services. Results are presented for 18-month and 36-month samples.

To be successful in healthcare training courses and jobs, many HPOG participants needed additional preparation in one or more areas. These include college preparation skills, knowledge of healthcare career options, soft skills appropriate for the healthcare workplace, and basic academic skills to participate productively in healthcare training.

Important Terms for this Chapter

Adult basic education (ABE)—instructional programs in basic academic skills such as reading and mathematics designed for adults with skill deficiencies in these subjects

Contextualized basic skills—adult basic education taught using concepts and materials related to occupational training

English as a second language (ESL)—instruction for English language learners

High school equivalency degree—instruction and assistance in obtaining the functional equivalent of a high school degree for those without a high school diploma

Soft skills training—instruction in and modeling of appropriate professional workplace behavior and interpersonal skills

Stackable credentials—recognized skills based on courses that connect with other courses representing successive steps on occupational career pathways

Work-based or "active" learning—instruction that takes place in a workplace setting

The majority of programs (41 programs, 85%) offered soft skills training (Exhibit 4-1) which focuses on personal and social skills and behavior appropriate to the workplace. In HPOG, this included emphasis on how to behave around patients and in healthcare settings. Also, about half of programs (26 programs, 54%) offered introduction to healthcare careers workshops. These generally explored the range of jobs in healthcare, potential career pathways, and combinations of academic training and practical experience to enter and move along those pathways. Slightly fewer programs offered computer (20 programs, 42%) and financial literacy courses (19 programs, 40%), prerequisite subject courses (e.g., Chemistry or Biology) (15 programs, 31%), and training in study skills and other behaviors to support success in college (14 programs, 29%). Other pre-training activities included vocational English for healthcare and other program-specific pre-training workshops.

Exhibit 4-1. Pre-Training Activities Offered

Pre-Training Activity	Number of Programs	Percentage of Programs
Soft skills training (N=48)	41	85
Introduction to healthcare careers (N=48)	26	54
Computer/technological skills training (N=48)	20	42
Financial literacy workshop (N=48)	19	40
Prerequisite subject courses (N=48)	15	31
College skills training (N=49)	14	29
Other (N=8)	6	13

Notes: Multiple responses were permitted and therefore results do not sum to 100 percent.
N=48 to 49 programs
Missing: 0–1 programs.
Source: HPOG Grantee survey, 2014, Q8.1.

More than half of the 18-month sample (64%) and the 36-month sample (63%) engaged in one or more of these pre-training activities (Exhibit 4-2). Participants most often attended soft skills training, with 44 percent enrollment. The second most commonly attended pre-training activity was introduction to healthcare careers, with 31 percent enrollment. These patterns remained consistent among the 36-month sample.

Exhibit 4-2. Participation in Pre-Training Activities

Pre-Training Activity	18-month Sample		36-month Sample	
	Number of Participants	Percentage of Participants	Number of Participants	Percentage of Participants
Soft skills training	8,935	44	3,747	43
Introduction to healthcare careers or occupations	6,358	31	2,543	29
Prerequisite subject courses for healthcare training	2,616	13	1,367	16
College skills training	1,423	7	727	8
Any pre-training activity	13,031	64	5,542	63

Note: Samples include participants with at least 18 months of experience since enrollment (enrolled by April 1, 2014) and participants with at least 36 months of experience since enrollment (enrolled by October 1, 2012). Participation in multiple activities is included in multiple rows.
N=20,384 for 18-month sample
N=8,748 for 36-month sample
Source: PRS, 2015.

Compared to the pre-training activities described above, HPOG programs were less likely to include formal basic skills education as part of their programs. For example, ABE and high school equivalency degree classes were offered directly by only 21 and 19 programs, respectively (43% and 39%) (Exhibit 4-3). Fewer than 20 percent of programs offered ESL instruction or pre-high school equivalency degree classes directly.

Exhibit 4-3. Basic Skills Education Offered

Basic Skills Education	Number of Programs	Percentage of Programs
Adult basic skills	21	43
High school equivalency classes	19	39
ESL instruction	9	18
Pre-high school equivalency classes	7	14

Notes: Multiple responses were permitted and therefore results do not sum to 100 percent.
N=49 programs.
Missing: 0 programs.
Source: PRS, 2015.

Several factors may have contributed to the relative lack of basic skills training opportunities provided directly by HPOG programs. For example, programs may have reduced the need for basic skills training by establishing eligibility criteria that specify minimum grade-level requirements in reading and math.[26] Also, some programs reported that adult basic skills training was readily available in their communities and they did not need to provide the service in-house.[27] Alternatively, 10 programs (31%) indicated they integrated basic skills into some healthcare training courses (not reflected in basic skills counts in the PRS) and may not have offered separate basic skills courses.[28] Over half of these programs (six were identified during visits for the HPOG Impact study) implemented a specialized model for contextualized basic skills instruction in at least one healthcare course.[29] In this model—Integrated Basic Education and Skills Training (I-BEST)—an occupational training instructor is paired with a basic skills instructor in the same course.

Given the relative lack of basic skills training available directly in HPOG programs, it is not surprising that relatively few participants enrolled in basic skills education. In both the 18-month and 36-month samples, about 5 to 6 percent of HPOG students participated in ABE classes, 1 percent in high school equivalency degree/pre-high school equivalency degree classes, and 1 percent in ESL classes (Exhibit 4-4). These numbers likely understate the proportion of students who received basic skills education. As reported above, HPOG sometimes both integrated basic skills education into occupational training and provided them through referrals to outside agencies. Those instances of service receipt were not included in the administrative data available to the study.

Exhibit 4-4. Participation in Basic Skills Education

Basic Skills Activity	18-month Sample		36-month Sample	
	Number of Participants	Percentage of Participants	Number of Participants	Percentage of Participants
ABE	972	5	484	6
High school equivalency or pre-high school equivalency classes	272	1	131	1
ESL instruction	191	1	96	1

Notes: Samples include participants with at least 18 months of post-enrollment experience (enrolled by April 1, 2014) and participants with at least 36 months of post-enrollment experience (enrolled by October 1, 2012). Participation in multiple activities is included in multiple rows.
N=20,384 participants for 18-month sample.
N=8,748 for 36-month sample.
Source: PRS, 2015.

The majority of participants who participated in basic skills education completed these classes.[30] For example, of those who had begun an adult education class, 69 percent had completed it by 18 months after enrolling in HPOG, and 82 percent had completed it by 36 months after enrolling. In the same period, 76 percent of HPOG participants who had begun an ESL class and 50 percent of those who had begun a pre-high school equivalency degree or high school equivalency degree class had completed their course. For those with 36 months of post-enrollment time, 68 percent and 50 percent of participants who had begun ESL and pre-high school equivalency activities, respectively, completed them.

5. Receipt of Support Services

Comprehensive support services are an important part of the HPOG Program and a key feature of the career pathways framework. This chapter presents findings about the support services HPOG programs offered, including case management, academic and career supports, training-related financial assistance, personal and family supports, and services related to employment and job retention. It also describes participants' receipt of those services. The HPOG Program logic model illustrates participation in these services as an important feature of programs in achieving desired outcomes (See Appendix D).

Important Terms for this Chapter

Academic supports and counseling—helping participants with course selection and guiding them to course completion; tutoring; helping participants to prepare for examinations and fulfill license or credential requirements

Case management—monitoring participant progress, assessing needs, and providing supports

Financial assistance—financial support for training-related expenses

Personal advising and counseling—offering guidance about and assisting with behavioral issues and other personal challenges to program retention and completion

Personal and family services and supports—services or supports for individuals and their families to help solve life situations that may interfere with successful program retention and completion

Individual job search assistance—one-on-one ongoing assistance for a job search, e.g., labor market information, counseling on job search, application and interview techniques

Job-readiness workshop—classroom instruction in how to find, apply for, and obtain employment

Job search/placement—general counseling and information on how to locate and obtain jobs

Job screening—program staff's vetting of participants as potential recruits for specific employers

5.1 Case Management

Comprehensive support services are an important part of the HPOG Program. To help participants enroll in and complete training, virtually all programs employed case managers. Case managers performed a variety of duties intended to support program retention and completion. **In a majority of programs, case managers helped participants by providing academic and career counseling, connections to needed support services, personal and financial advice and guidance, and help finding employment**.[31] HPOG program staff were in contact with participants through a variety of modes, including email and other electronic communication and meetings (individually, in groups, and by telephone). On average, staff were in contact with participants two to three times a month in person in an individual setting.[32]

5.2 Academic and Career Supports

In addition to case management, **the most common support services focused on academic success and career choice**. Nearly all programs provided these services in multiple ways, including personal advising and counseling, individual and group tutoring, and career workshops. Exhibit 5-1 presents findings on the types and availability of academic and career supports.

Exhibit 5-1. Academic and Career Counseling and Support Services Offered

Service	Number of Programs	Percentage of Programs
Academic and career counseling	45	92
Tutoring	38	78
Peer support activities	34	69
Mentoring activities	23	47

Note: Multiple responses were permitted and therefore results do not sum to 100 percent.
N=49 programs.
Missing: 0 programs.
Source: HPOG Grantee survey, 2014, Q8.15, Q9.8.

Given the wide availability of these supports, almost all HPOG participants (94%) received an academic or training support service in the first 18 months after enrollment (Exhibit 5-2). Case management was the most common service, almost universally received (89%). Counseling services (often but not always delivered by case managers) also were common: 82 percent of participants received services such as academic counseling, advising, mentoring or peer support, comprehensive academic assessments, and tutoring in the first 18 months. The pattern was similar for the sample of participants with 36 months of post-enrollment experience: 94 percent had received any academic or training support service, 90 percent had received case management services, and 79 percent had received counseling services. This suggests that the majority of services were received initially within the first 18 months of enrollment.

Exhibit 5-2. Participants' Receipt of Academic and Training Support Services in the First 18 and 36 Months after Enrollment

	18-month Sample		36-month Sample	
Service	Number of Participants	Percentage of Participants	Number of Participants	Percentage of Participants
Pre-enrollment/intake assessment	17,773	87	7,538	86
Case management/career advisor/navigator	18,226	89	7,831	90
Counseling services	16,668	82	6,903	79
Academic counseling/advising	13,744	67	5,910	68
Mentoring/peer support	7,859	39	3,177	36
Comprehensive assessment	11,249	55	4,629	53
Tutoring	3,663	18	1,670	19
Other counseling services	2,373	12	1,250	14
Cultural programming	1,370	7	595	7
Training and work-related resource assistance	14,574	72	6,546	75
Books	11,549	57	5,090	58
Exam/exam prep fees (for licensing/certification)	7,409	36	3,365	39
Licensing and certification fees	6800	33	3,307	38
Work/training uniforms, supplies, tools	10,705	53	4,951	57
Computer/technology	3,835	19	1,617	19
Any academic and training support total	**19,177**	**94**	**8,188**	**94**
No academic and training support	1,207	6	560	6

Note: Samples include participants with at least 18 months of post-enrollment experience (enrolled by April 1, 2014) and participants with at least 36 months of post-enrollment experience (enrolled by October 1, 2012). Participants receiving multiple types of services are included in multiple rows.
N=20,384 individuals for the 18-month sample
N=8,748 individuals for the 36-month sample
Source: PRS, 2015.

5.3 Training-related Financial Assistance

HPOG programs recognized that unmet financial needs could be a major barrier for their target population to enroll in and complete occupational training. Most programs provided training and work-related financial assistance, such as tuition assistance or tuition waivers, payments for school supplies and uniforms, and payments for or waivers of fees for certifications and licensing exams. **All programs offered some form of financial assistance for training-related costs.** Importantly, 47 programs (96%) covered all or part of participants' tuition costs, with about half of all programs (24 programs, 49%) covering all tuition costs.[33] In addition to providing direct tuition assistance, many programs also relied on other sources of financial assistance for participants. The two most common non-HPOG-funded sources of financial support included Pell Grants (40 programs, 82%) and Workforce Investment Act (WIA) Individual Training Accounts (ITAs) (28 programs, 58%).[34]

In addition to providing resources to cover tuition costs, all programs covered the cost of books, licensing and certification fees, and exam preparation fees. All but one program (98%) covered the cost of uniforms, supplies, and tools.[35] Almost half of all programs (22 programs, 46%) offered financial support for computers or other equipment. Of the programs that offered assistance for academic-related expenses, about a third (32% or more, depending on the specific expense) did so for all participants without request. Programs most commonly offered—without request—assistance for the cost of books (25 programs, 51%).[36]

5.4 Personal and Family Supports

Programs also offered services to participants to address personal and family material needs that might have otherwise interfered with stable training participation and completion. **Although numerous programs offered such services directly—most notably transportation and child care assistance—many referred participants in need to available community resources** (Exhibit 5-3).

Exhibit 5-3. Personal and Family Services and Supports Offered

Service	Provided Service		Provided Directly Only		Provided by Referral Only		Provided Both Directly and by Referral	
	Number of Programs	Percentage of Programs	Number of Programs	Percentage of Programs	Number of Programs	Percentage of Programs	Number of Programs	Percentage of Programs
Transportation assistance	48	98	38	79	3	6	7	15
Child care assistance	45	92	24	53	12	27	9	20
Primary or medical care	36	73	3	8	31	86	2	6
Short-term/temporary housing	36	73	5	14	28	78	3	8
Food assistance (other than SNAP)	36	73	7	19	25	69	4	11
Legal assistance	34	69	1	3	33	97	0	0
Addiction or substance abuse services	33	67	1	3	31	94	1	3
Family preservation services	28	57	1	4	25	89	2	7
Family engagement services	25	51	2	8	22	88	1	4
Driver's license assistance	24	49	10	42	12	50	2	8
Other housing assistance	24	49	5	21	19	79	0	0

Note: The percentages of programs providing services by service delivery strategy (i.e., directly and/or by referral) are the percentages of all programs providing each specific support service and not the percentages of all programs in the study.
N=49.
Missing: 0 programs.
Source: HPOG Grantee survey, 2014, Q9.11.

Over half of participants (53%) received personal and family support services either directly or by referral from HPOG programs within 18 months of enrollment (Exhibit 5-4). Transportation assistance was by far the most common of these supports, received by 47 percent of participants. Given that HPOG programs offered most other support services through referrals, fewer participants received other personal and family support services from programs directly, including, for example, child or dependent care (8% of participants) and help with medical care (8% of participants), including assistance accessing healthcare screenings or physicals required by employers.[37]

Exhibit 5-4. Participants' Receipt of Personal and Family Services and Supports in the First 18 and 36 Months after Enrollment

Service	18-month Sample		36-month Sample	
	Number of Participants	Percentage of Participants	Number of Participants	Percentage of Participants
Transportation Services				
General transportation assistance	9,537	47	4,520	52
Driver's license assistance	152	1	101	1
Car repair costs	623	3	410	5
Car insurance costs	219	1	156	2
Housing Services				
Security deposit	75	<1	47	1
First month's rent	253	1	156	2
Funds for housing program	50	<1	42	1
Short-term/temporary housing program	215	1	132	2
Home heating assistance	183	1	143	2
Utilities assistance	806	4	513	6
Other housing support services	534	3	296	3
Other Personal and Family Supports				
Child/dependent care assistance	1,709	8	942	11
Food assistance (non-SNAP)	737	4	415	5
Addiction and substance abuse services	38	<1	19	<1
Family preservation services	194	1	123	1
Family engagement services	257	1	136	2
Legal assistance	96	1	51	1
Primary/medical care	1,568	8	898	10
Food and shelter	544	3	331	4
Other emergency assistance	381	2	221	3
Any Personal and Family Services and Supports	**10,811**	**53**	**5,094**	**58**

Note: Samples include participants with at least 18 months of post-enrollment experience (enrolled by April 1, 2014) and participants with at least 36 months of post-enrollment experience (enrolled by October 1, 2012). Participants receiving multiple types of services are included in multiple rows.
N=20,384 individuals for the 18-month sample
N=8,748 for the 36-month sample.
Source: PRS, 2015.

5.5 Employment and Job Retention Supports

Employment in a healthcare job with a career path is an important outcome for HPOG participants. To assist participants in attaining this goal, **all HPOG programs provided multiple employment assistance services, including individual job search assistance, advising on career**

and job choices and, job listings. Nearly all programs also provided job search skills workshops, identified job openings, met with employers to identify job openings, operated or referred to job fairs, and provided job-readiness workshops and job screening (Exhibit 5-5).

Exhibit 5-5. Employment Assistance Services Offered

Service	Number of Programs	Percentage of Programs
Individual job search assistance (N=49)	49	100
Advising on career and job choices (N=49)	49	100
Providing job listings (N=49)	49	100
Job search skills workshops (N=48)	47	98
Identifying job openings for program graduates (N=49)	47	96
Meeting with employers to identify job openings for graduates (N=49)	47	96
Operating or referring to job fairs (N=49)	46	94
Job-readiness workshops (N=48)	45	94
Job screening (N=48)	39	81

Note: Multiple responses were permitted and therefore results do not sum to 100 percent.
N= 48 to 49
Missing: 0–1 programs.
Source: HPOG Grantee survey, 2014, Q9.21.

In addition to providing assistance in finding a job, **nearly all programs (46 programs, 94%) also offered job retention support to HPOG participants** once they were employed and for a period of either 30, 60, or 90 days (Exhibit 5-6).[38] Most used multiple communication methods for post-placement follow-up with participants, including telephone calls (44 programs), email (42 programs), and in-person meetings (39 programs). Nearly half (22 programs) used social media for this purpose. Fewer programs were in contact with the participants' employers (19 programs).

Exhibit 5-6. Availability and Duration of Post-Placement and Retention Services

	First 30 Days	First 60 Days	First 90 Days
Service	Number of Programs	Number of Programs	Number of Programs
Phone check-ins with participant (N=44)	11	5	24
Email check-ins with participant (N=42)	9	5	21
In-person meetings with participant (N=39)	10	4	21
Social media check-ins with participant (e.g., Facebook, LinkedIn) (N=22)	5	0	11
Phone calls or meetings with participant's supervisor (N=19)	4	2	10
Other (N=4)	1	0	2

Notes: Duration refers to programs providing follow-up services for 30 days, 60 days or 90 days (e.g. so recipients in a program that offers follow-up services are receiving the service within the 90 days but not for the full 90 days). Not all programs identified a duration period for individual post-placement and retention services offered.
Multiple responses were permitted and therefore results do not sum to 100 percent.
N ranged from 4 to 44 programs.
Missing: 1–7 programs.
Source: HPOG Grantee survey, 2014, Q9.22.

While all programs offered multiple types of employment assistance services, not all participants took part in these activities within 18 months of enrolling in HPOG. Participants

most commonly received career counseling and job choice advising from a job coach or career navigator, which programs reported for 74 percent of HPOG participants (Exhibit 5-7). Other employment services participants received included job search and placement assistance (52%), job retention services (25%) and job-readiness workshops (12%).[39] Among the 36-month sample, participation in employment assistance services was about the same, suggesting that almost all participants who received the services did so within 18 months of enrolling in HPOG.

Exhibit 5-7. Participants' Receipt of Employment Assistance Services

Service	18-month Sample		36-month Sample	
	Number of Participants	Percentage of Participants	Number of Participants	Percentage of Participants
Career and job choices advising	15,043	74	6,513	75
Job search/placement assistance	10,579	52	4,607	53
Job retention services	5,137	25	2,360	27
Job-readiness workshop	2,421	12	1,084	12

Notes: Samples include participants with at least 18 months of post-enrollment experience (enrolled by April 1, 2014) and participants with at least 36 months of post-enrollment experience (enrolled by October 1, 2012). Participants receiving multiple types of services are included in multiple rows.
N=20,384 for the 18-month sample
N=8,748 for the 36-month sample
Source: PRS, 2015.

6. Healthcare Training Opportunities, Participation and Completion

This chapter presents updated findings about HPOG participants' healthcare training course participation, completion status, and credentials obtained. The HPOG Program logic model illustrates participation in occupational training as an output and completion of occupational training as an outcome (see Appendix D).

6.1 Occupational Skills Training Opportunities and Participation

HPOG programs provided a wide range of healthcare training opportunities. The training activities varied in length and intensity, depending on the requirements of the targeted profession. Some programs for entry-level positions were as short as 2 weeks, while others, such as training for technical or nursing positions, required commitments of 4 years or more. Exhibit 6-1 summarizes the breadth of healthcare training courses provided across HPOG programs.

Exhibit 6-1. Occupational Training Offered

Training	Number of Programs	Percentage of Programs
Nursing aides, orderlies, and attendants	44	90
Medical records and health information technicians	39	80
Medical assistants	38	78
Pharmacy technicians	36	73
Licensed practical and vocational nurses	30	61
Registered nurses	29	59
Diagnostic-related technologists and technicians	29	59
Phlebotomists	28	57
Healthcare support occupations (all others)	27	55
Emergency medical technicians and paramedics	25	51
Health practitioner support technologists and technicians	22	45
Psychiatric and home health aides	21	43
Physical therapist assistants and aides	19	39
Health technologists and technicians	15	31
Clinical laboratory technologists and technicians	14	29
Occupational therapy assistants and aides	10	20
Health diagnosing and treating practitioners	9	18
Community and social service specialists	7	14
Counselors	4	8
Other	15	31

Notes: Multiple responses were permitted and therefore results do not sum to 100 percent. The types of training courses listed correspond to standard occupational classifications from the Bureau of Labor Statistics.
N=49 programs
Missing: 0 programs.
Source: PRS, 2015.

The majority of HPOG participants took part in healthcare training. In our 18-month sample, 83 percent (16,942) participated in healthcare training, either beginning a course or continuing one started before enrollment. Scenarios varied for HPOG participants who did not participate in a healthcare training course in the 18 months after enrollment. Some were enrolled in pre-training activities, such as basic skills education, others were waiting for a training course to begin (and potentially receiving supportive services), and some had dropped out before beginning a training course.

Of those for whom at least 36 months had passed since program enrollment, 87 percent (7,643) participated in healthcare training. This suggests that only a small number of HPOG participants began their first healthcare training after being in the program 18 months.

HPOG participants pursued a variety of healthcare training courses, with the vast majority enrolling in the 10 most popular (first 10 in Exhibit 6-2). Among the 18-month sample, the most common were courses for nursing aides, orderlies, and attendants, which included training to become a CNA (34%) (Exhibit 6-2). The next most common course was training to become an RN (10%), followed by training to become an LPN/LVN (10%). Among the 36-month sample, rates of participation across training occupations were similar and the rate of training as a nursing aide, orderly, or attendant remained unchanged (34%). A slightly lower percentage of participants trained as RNs (8%) while slightly higher percentages undertook LPN/LVN training (11%).

Exhibit 6-2. Participants' Enrollment in Healthcare Training Courses by Type of Occupation

Occupation	18-month Sample		36-month Sample	
	Number of Participants	Percentage of Participants	Number of Participants	Percentage of Participants
Nursing aides, orderlies, and attendants	5,751	34	2,961	34
Registered nurses	1,763	10	699	8
Licensed practical and vocational nurses	1,694	10	973	11
Medical records and health information technicians	1,674	10	688	8
Medical assistants	1,429	8	639	7
Psychiatric and home health aides	1,069	6	299	3
Pharmacy technicians	645	4	243	3
Diagnostic-related technologists and technicians	586	3	124	1
Phlebotomists	497	3	238	3
Healthcare support occupations (all others)	400	2	158	2
Emergency medical technicians and paramedics	393	2	156	2
Health practitioner support technologists and technicians	206	1	95	1
Community and social service specialists	190	1	53	1
Clinical laboratory technologists and technicians	161	1	73	1
Physical therapist assistants and aides	109	1	71	1
Occupational therapy assistants and aides	67	<1	36	<1
Dental hygienists	52	<1	39	<1
Health technologists and technicians	51	<1	23	<1
Health diagnosing and treating practitioners	48	<1	13	<1
Massage therapists	44	<1	22	<1
Counselors	39	<1	25	<1
Child care advocate	5	<1	11	<1
Other	69	<1	4	<1

Notes: Samples include participants with at least 18 months of post-enrollment experience (enrolled by April 1, 2014) and participants with at least 36 months of post-enrollment experience (enrolled by October 1, 2012) who began healthcare training programs. Participants who enrolled in more than one type of training are included in multiple rows. Activities are categorized following Bureau of Labor Statistics Standard Occupational Classifications. Although included in the category of healthcare support occupations, phlebotomists and pharmacy technicians are recorded separately from that category given their high rates of participation.
N=16,942 for the 18-month sample
N=7,653 for the 36-month sample
Source: PRS, 2015.

In contrast to the relatively large percentages of HPOG participants enrolled in courses for nursing and nursing-related occupations, fewer participated in a broad range of other healthcare training courses. For example, in the 18-month sample 10 percent of participants who began a training course enrolled in a medical records/HIT training, and 8 percent enrolled in a medical assistant course. Participants trained for other common occupations including psychiatric and home health aides (6 % of participants who began training), pharmacy technicians (4%), and diagnostic-related technologists (3%). Less than 3 percent of participants enrolled in each of an additional 14 types of occupational training.

6.2 Work-Based Learning Opportunities

As part of their training offerings, many HPOG programs included work-based learning opportunities as a way of teaching and reinforcing clinical skills. Most commonly, this came in the form of a clinical section that was part of a course (45 of 49 programs offered at least one such course, 92%).[40] Some programs also implemented work-based learning outside of formal coursework. The most common of these work-based learning opportunities was work experience assignments or transitional jobs, with 9 percent of HPOG participants engaged by 36 months after enrollment (Exhibit 6-3). By that same time, 3 percent of participants had engaged in on-the-job training and 1 percent had participated in a job-shadowing activity. Because programs were prohibited from using HPOG funds to subsidize wages or pay stipends to participants, paid work experience and on-the-job training had to be funded by other sources.

Exhibit 6-3. Participation in Work-Based Learning Opportunities (Outside of Formal Coursework)

Activity	18-month Sample		36-month Sample	
	Number of Participants	Percentage of Participants	Number of Participants	Percentage of Participants
Work experience or transitional job	1,378	7	804	9
On-the-job training	505	2	295	3
Job shadowing	70	0	53	1

Note: Samples include participants with at least 18 months of post-enrollment experience (enrolled by April 1, 2014) and participants with at least 36 months of post-enrollment experience (enrolled by October 1, 2012). Participants receiving multiple types of services are included in multiple rows.
N=20,384 individuals for the 18-month sample
N=8,748 individuals for the 36-month sample
Source: PRS, 2015.

6.3 Healthcare Occupational Training Completion

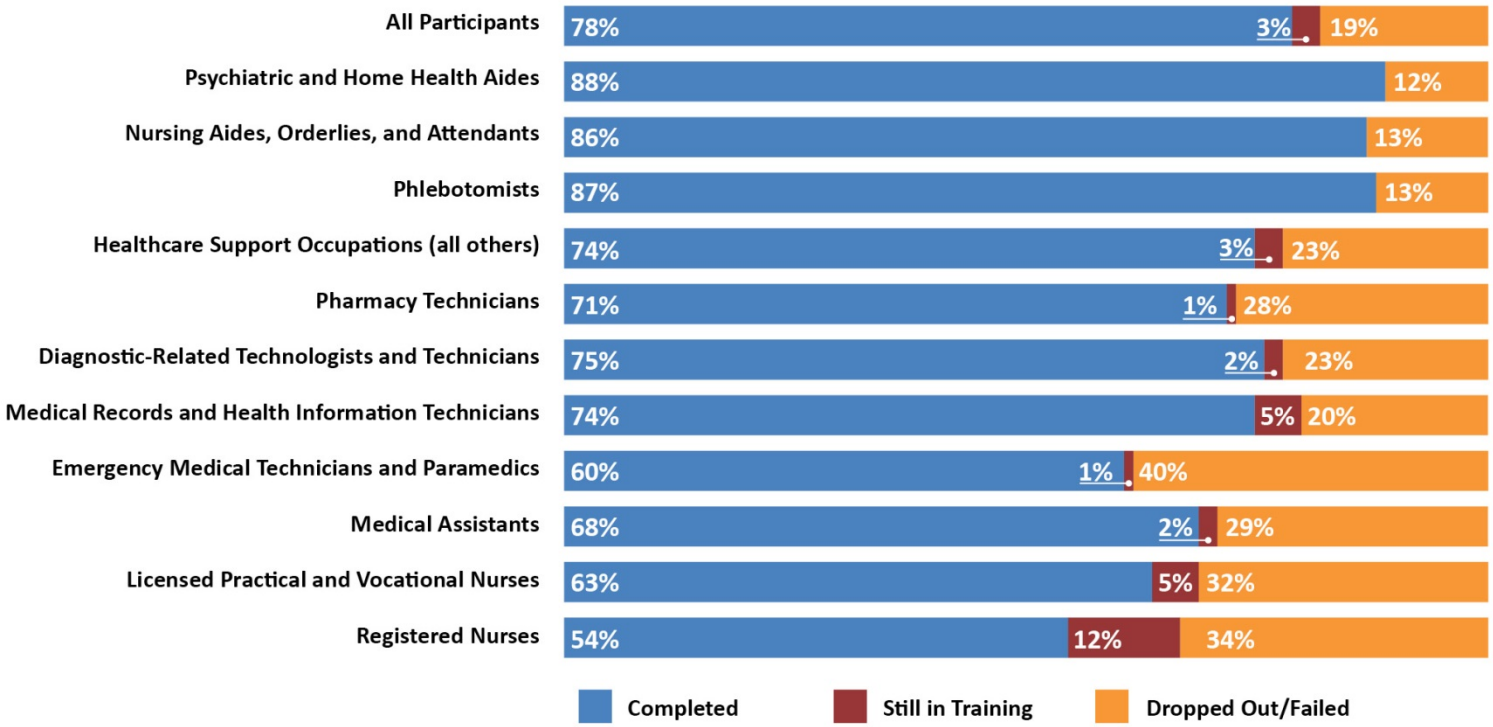
In the 36-month sample, 78 percent of participants who had engaged in healthcare training had completed at least one course (Exhibit 6-4)**.**[41] Nineteen percent dropped out, and only 3 percent were still in a training course.[42]

6.3.1 Healthcare Training Completion by Occupation

Completion rates of healthcare training courses varied by the occupation for which participants were training (Exhibit 6-4). In the 36-month sample, the highest completion rates were for psychiatric and home health aides (88% of those who enrolled completed); phlebotomists (87% completed); and nursing aides, orderlies, and attendants (86% completed).

The percentages of those who completed courses in 36 months was much lower for LPNs/LVNs (63%) and RNs (54%). These lower completion rates reflect both higher dropout rates (32% for LPNs/LVNs and 34% for RNs compared with 19% overall) and higher rates of those still in training (5% for LPNs/LVNs and 12% for RNs compared with 3% overall), given the longer time needed to complete these nursing training courses.

Exhibit 6-4. Completion Status by Healthcare Occupation Types among Participants Who Began Training (36-month Sample)



* The Bureau of Labor Statistics classifies phlebotomists and pharmacy technicians as healthcare support occupations, but here they are recorded separately from the rest of the category given their high rates of participation.

Notes: Sample includes participants with at least 36 months of post-enrollment experience (enrolled by October 1, 2012) who began healthcare training programs. Participants are represented in each type of training in which they enrolled. Each bar shows percentages of those who enrolled in the corresponding training program listed in Exhibit 6-2. Percentages may not add up to 100 percent because of rounding. Percentages are of participants with known completion statuses. Less than 1 percent of training programs with end dates are missing completion status. The exhibit shows only healthcare training programs with more than 100 participants in the 36-month sample.

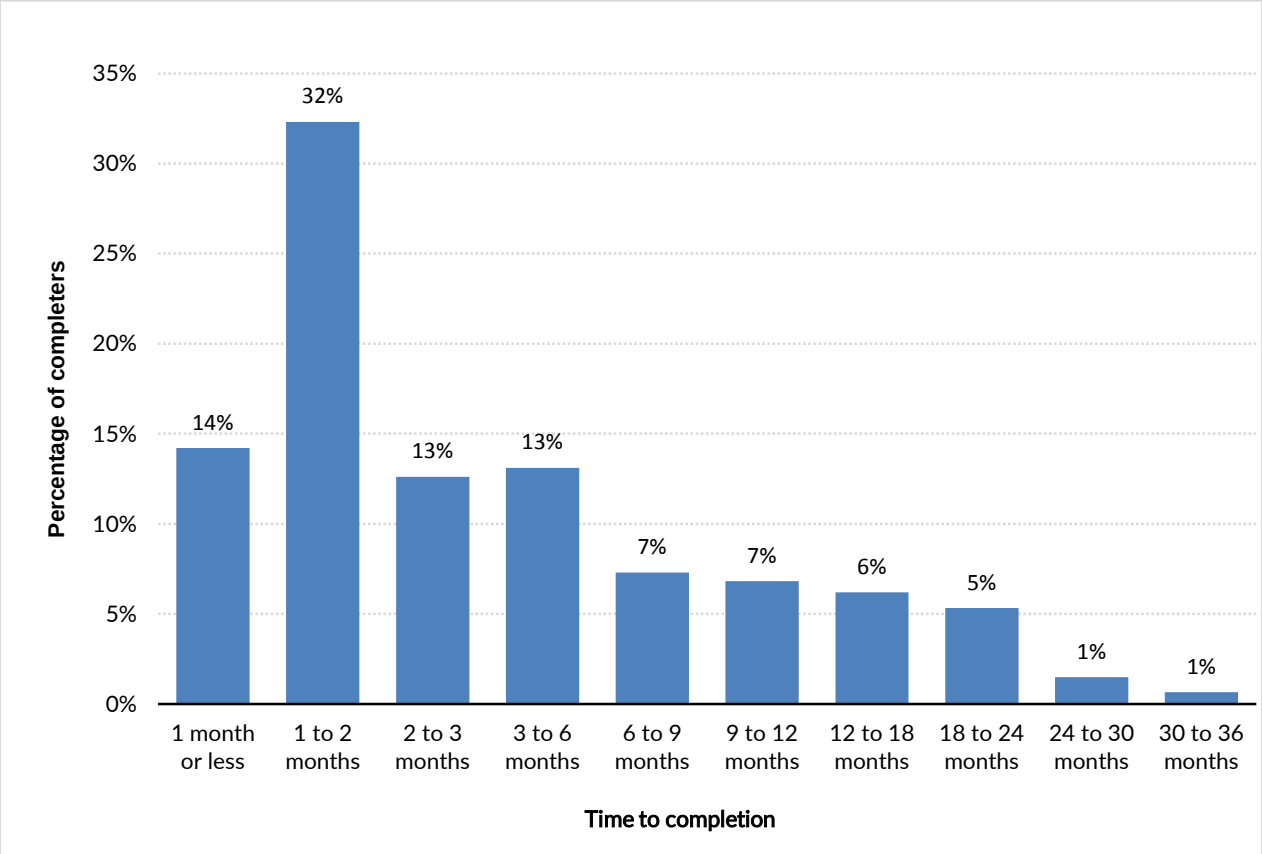
N=7,653 participants for the 36-month sample.

Source: PRS, 2015.

6.3.2 Time to Complete Healthcare Training

The majority of HPOG participants who completed healthcare training were in relatively short-term training courses (i.e., 6 months or less). The length of an HPOG healthcare training course is defined as the number of months between the first and the last days of training, as indicated in a participant's administrative record. This may include breaks in training and other time away from training and so represents only an approximation of actual training course length. Exhibit 6-5 shows the distribution of time spent in healthcare training for participants in the 36-month sample.[43] Most participants were in training for a relatively short period, with 72 percent of participants completing training in 6 months or less and 46 percent in 2 months or less.

Exhibit 6-5. Time Spent in Healthcare Training by Participants Who Had Completed a Healthcare Training Course (36-month Sample)



Notes: Sample includes participants with at least 36 months of post-enrollment experience (enrolled by October 1, 2012) who began and completed healthcare training programs. Participants who enrolled in more than one type of training course are included in the means for each corresponding column.
N=5,974
Source: PRS, 2015.

Participants who completed a training course within 36 months after enrolling had an average training length of 5.3 months and a median length of 3.0 months. Unsurprisingly, participants who completed a training course within 18 months after enrollment (not shown) spent less

time in training, about 3.5 months, with the median time to complete a training course about 2.0 months.

The length of time participants spent in a particular training course varied significantly by training occupation (Exhibit 6-6). Participants typically completed more quickly training for occupations that lead to entry-level positions for lower-wage jobs. For example, participants in the 36-month sample spent an average of 1.8 months training for jobs as psychiatric and home health aides, 2.1 months for jobs as nursing aides, orderlies, and attendants, and 3.8 months for jobs as phlebotomists.

Exhibit 6-6. Time to Complete Healthcare Occupational Training (36-month Sample)

Occupation	Time to Completion in Months (Mean)
Psychiatric and home health aides (N=529)	1.8
Nursing aides, orderlies, and attendants (N=3,559)	2.1
Phlebotomists (N=351)	3.8
Pharmacy technicians (N=183)	4.2
Emergency medical technicians and paramedics (N=105)	5.3
Diagnostic related technologists and technicians (N=253)	5.6
Healthcare support occupations (all others) (N=145)	5.9
Medical records and health information technicians (N=788)	6.0
Medical assistants (N=496)	8.9
Licensed and vocational nurses (N=709)	12.6
Registered nurses (N=455)	15.2

Notes: Samples include participants with at least 36 months of post-enrollment experience (enrolled by October 1, 2012) who began and completed healthcare training programs. Participants who enrolled in more than one type of training course are included in the means for each corresponding row.
N=5,974
Source: PRS, 2015.

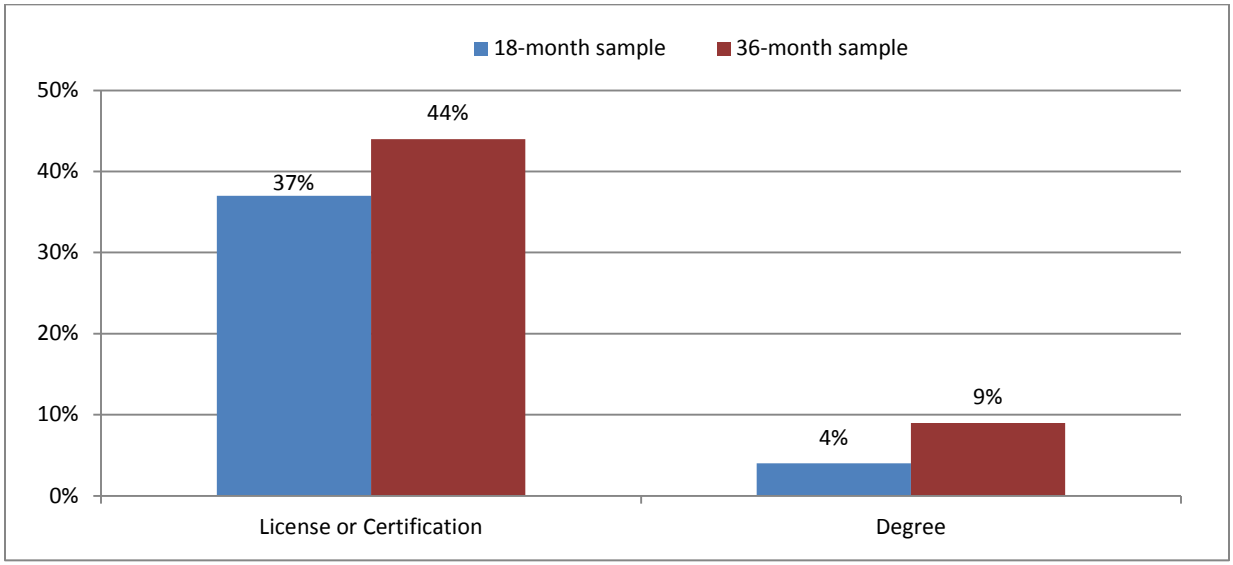
Other training courses took longer to complete. For the 36-month sample, participants took more than 15 months to complete training for jobs as RNs, and those in LPN/LVN training reported spending almost 13 months on average to complete it (Exhibit 6-6). Note that some participants had partially completed these longer-term courses before enrolling in HPOG. In fact, of those completing RN and LPN/LVN training courses, 67 and 60 percent, respectively, reported being in school when they enrolled in HPOG. In contrast, only 11 percent of psychiatric home health aides and 20 percent of pharmacy technicians reported being in school at the time of program enrollment.

6.4 Receipt of Certifications, Licenses, or Degrees

A primary goal of HPOG is for participants to receive credentials recognized by healthcare employers. Credentials may include employer-recognized third-party occupational certifications or licenses, as well as post-secondary degrees. About 37 percent of all participants in the 18-month sample who completed at least one healthcare training course received a regulatory license or third-party certification (Exhibit 6-7). In the 36-month sample, 44 percent of participants obtained such a license or certification. Many received multiple certifications. The total number of licenses and certifications earned among participants in the 18-month sample

was 10,918. Note that the percentage of participants obtaining a license or certification varied by the training course occupation. Variation across occupations reflects that not all occupations require or confer third-party certifications, and for some occupations, requirements for certifications vary by locality.

Exhibit 6-7. Receipt of Licenses and Certifications or Degrees by Participants who Completed Training, within 18 and 36 Months of Enrollment



Notes: Samples include participants with at least 18 months of post-enrollment experience (enrolled by April 1, 2014) and those with at least 36 months of post-enrollment experience (enrolled by October 1, 2012) who began and completed healthcare training programs. Participants who enrolled in more than one type of training course are included in the percentages for each corresponding bar.
N=12,299 for 18-month sample
N= 5,974 for 36-month sample
Source: PRS, 2015.

About 4 percent of participants in the 18-month sample and 9 percent in the 36-month sample received an Associate's, Bachelor's, or Master's degree (Exhibit 6-7). The majority of degrees earned (86% for the 18-month sample and 87% for the 36-month sample) were Associate's degrees. Two occupational training courses accounted for most of the degrees received in both samples. RNs and LPNs/LVNs made up more than two-thirds (69%) of the degrees received for participants in the 18-month sample and almost two-thirds (63%) in the 36-month sample.

6.5 Participation in and Completion of Multiple Healthcare Training Courses

The career pathway framework posits that after completing occupational training students may advance by taking additional training courses, sometimes immediately and sometimes after a period of employment. In most programs, HPOG grantees had flexibility to allow participants to enroll in additional training after completing a first course.[44] In the 18-month sample, 16 percent of HPOG participants who had completed one course enrolled in another. The percentage is slightly higher for the 36-month sample, where 21 percent engaged in a second training course after completing a first. The completion rate of all second or higher training enrollment was 72 percent for the 18-month sample and 71 percent for the 36-month sample.

The percentage of participants moving on to a second training course varied considerably across HPOG grantees. Of the 18-month sample, three grantees had more than a third of their participants move on to a second training course while 19 had fewer than 10 percent of their participants advance. This reflects, in part, varying program models, with some programs restricting additional training course enrollment in an effort to serve as many low-income individuals as possible within the grant period. The most common training courses followed by additional trainings were shorter-term, such as courses for nursing aides, orderlies, or attendants, medical records and health information technicians, and phlebotomists. For example, among the 1,741 participants who completed a nursing assistant training and began a second course, relatively few engaged in higher-level training in nursing, with 8 percent enrolling in LPN/LVN training and 6 percent enrolling in RN training. Most of them enrolled in another relatively short-term training also in the nursing assistant occupational category. For example, this could be additional training for a CNA to gain certification to provide intravenous medication.

7. HPOG Participant Career Aspirations

This chapter presents findings on participants' career aspirations. Specifically, the chapter summarizes HPOG participants' self-reported reasons for dropping out of training and their educational and employment goals. The information source is a survey of participants of the 27 non-tribal HPOG 1.0 grantees initiated 15 months after enrollment or random assignment.[45] The survey's major purpose was to collect key outcome information not included in administrative data. The sample for the findings presented in this chapter is 4,646 respondents who had enrolled in training between September 1, 2013 and September 30, 2014.

7.1 Educational and Career Goals

HPOG programs had the goal of training participants for stable, well-paying jobs with career pathways in healthcare. The 15-month follow-up survey of HPOG participants included questions related to participants' educational and career aspirations, as well their self-assessments of progress in those areas. This section reports the survey results for several items and reports changes since program entry for educational goals and "reservation wages" (the lowest wage an individual will accept when looking for a job).

Exhibit 7-1 presents results for participants' goals for educational attainment at the time of enrollment, and at approximately 15 months after enrolling in HPOG.[46]

Exhibit 7-1. Goals for Educational Attainment

Goal	Percentage at Enrollment	Percentage at 15 Months after Program Entry
No additional school	2	N/A
Grades 1–12 (no HS diploma/GED)	N/A	<1
High school diploma	11	5
GED or alternative credential	5	2
Alternative non-academic credential, including industry-recognized credential, certification of completing vocational training, etc.	15	N/A
Some college credit but less than 1 year	N/A	4
1 or more years of college credit but no degree	N/A	4
Associate's degree	22	20
Bachelor's degree or higher	46	59
Refused/Don't know	0	5

Notes: Question at program entry is addressed to HPOG staff entering data and reads: "What is the highest level of education the participant eventually *expects* to complete? (*choose one category*)." Question in 15-month follow-up survey of HPOG participants reads: "What is the highest level of regular academic education that you eventually expect to complete?" Response categories varied between the two surveys, so some responses are not applicable to each sample (indicated by N/A).
For survey at enrollment, N=4,282 participants at HPOG grantee programs participating in the HPOG Impact or PACE studies (excludes four programs).
Missing for this survey item=103.
For 15-month follow-up survey of HPOG participants, sample is 4,646 participants across all HPOG programs who enrolled in HPOG between September 1, 2013 and September 30, 2014, and responded to the 15-month follow-up survey of HPOG participants.
Missing for this survey item=0.
Sources: Survey at enrollment; 15-month follow-up survey of HPOG participants and 15-month follow-up survey of PACE participants.

At 15 months after program enrollment, most HPOG participants expected to attain a post-secondary degree, with the largest number aiming for a Bachelor's degree or higher. When compared with educational aspirations at enrollment, the percentage of those with degree aspirations increased overall (from 68% at enrollment to 79% at 15 months after enrollment). The 15-month follow-up survey of HPOG participants also asked for participants' self-assessment of educational progress: "Would you say you strongly agree, somewhat agree, somewhat disagree, or strongly disagree with the following statement: I am making progress towards my long-range educational goals?" In response, 87 percent of HPOG participants answered either "strongly agree" or "somewhat agree" (Exhibit 7-2).

Exhibit 7-2. Progress Towards Long-Range Educational Goals

	Response to Statement: "I am making progress towards my long-range educational goals."	
Level of Agreement	**Frequency**	**Percentage**
Strongly agree	2,588	56
Somewhat agree	1,446	31
Somewhat disagree	329	7
Strongly disagree	232	5
Refused	3	<1
Don't know	25	1
Total	**4,623**	**100**

Notes: Sample is 4,646 participants across all HPOG programs who enrolled in HPOG between September 1, 2013 and September 30, 2014, and responded to the 15-month follow-up survey of HPOG participants.
Missing for this survey item=23.
Sources: 15-month follow-up survey of HPOG participants and 15-month follow-up survey of PACE participants.

The HPOG Program ties educational goals to career goals. The 15-month follow-up survey of HPOG participants asked two questions related directly to participants' self-assessment of career progress: "Would you say you [agree] with the following statements?: 'I am making progress toward my long-range employment goals,' and 'I see myself on a career path.'" Similar large majorities either strongly or somewhat agreed with each statement (Exhibit 7-3).

Exhibit 7-1. Self-Assessment of Career Progress

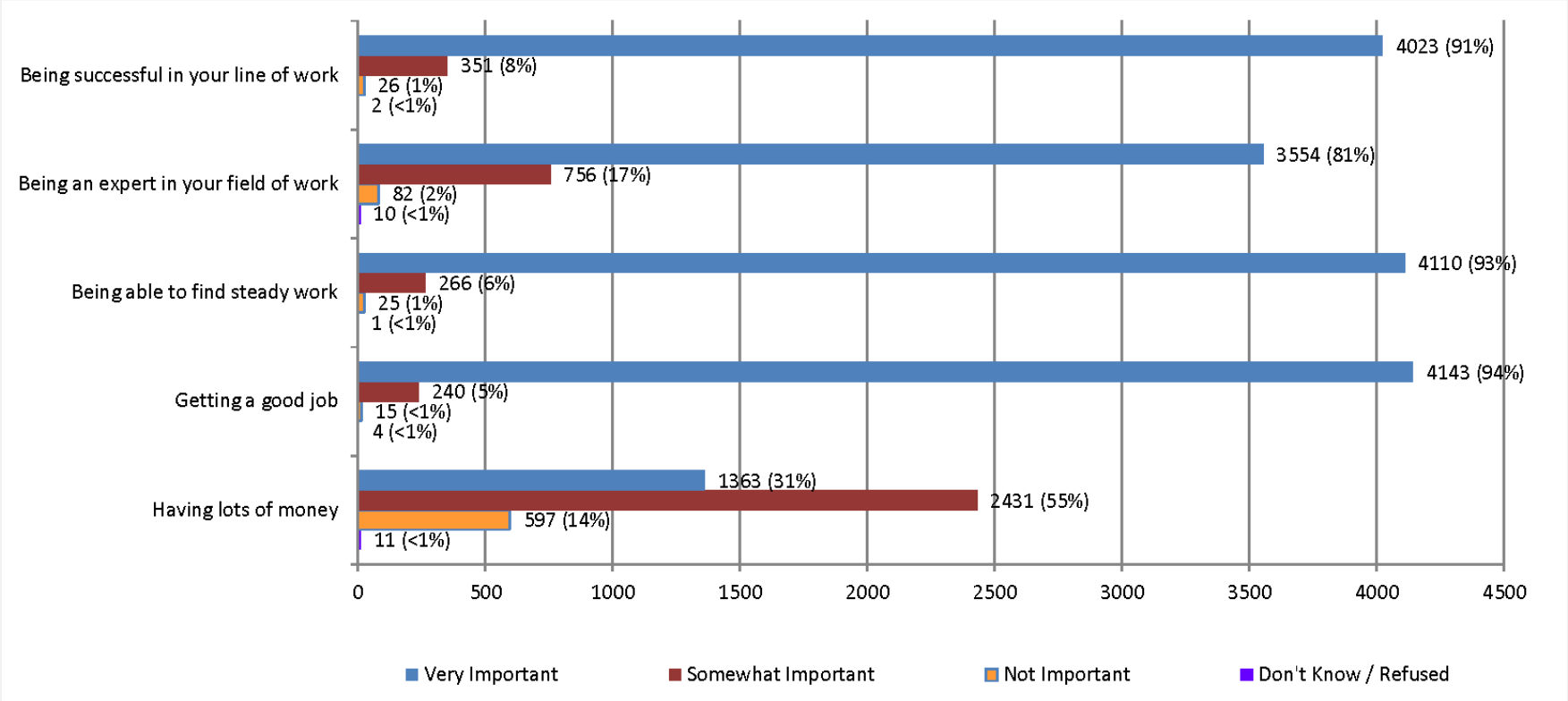
	Response to Statement:			
	"I am making progress toward my long-term employment goals."		"I see myself on a career pathway."	
Level of Agreement	Frequency	Percentage	Frequency	Percentage
Strongly agree	2,840	61	3,223	69
Somewhat agree	1,274	27	975	21
Somewhat disagree	292	6	244	5
Strongly disagree	217	5	182	4
Don't know	2	1	2	<1
Total	**4,646**	**100**	**4,646**	**100**

Notes: Sample is 4,646 participants across all HPOG programs who enrolled in HPOG between September 1, 2013 and September 30, 2014, and responded to the 15-month follow-up survey of HPOG participants.
Missing for this survey item=0.
Sources: 15-month follow-up survey of HPOG participants and 15-month follow-up survey of PACE participants.

7.2 Employment Goals and Expectations

The 15-month follow-up survey asked HPOG participants several questions about their employment goals and expectations. One set of questions asked respondents to prioritize in their lives the importance of a variety of work dimensions (Exhibit 7-4).

Exhibit 7-4. Ranking of Importance of Work Dimensions



NoteS: Sample is 4,402 participants across 42 programs who enrolled in HPOG between September 1, 2013 and September 30, 2014, and responded to the 15-month follow-up survey of HPOG participants (participants from HPOG programs participating in PACE are not included).
Missing for this survey item=0.
Source: 15-month follow-up survey of HPOG participants.

The results presented in Exhibit 7-4 suggest that most participants were committed to developing a successful career in their chosen line of work. For example, almost all respondents answered either "very important" or "somewhat important" to the dimension of being successful in their line of work. Almost all respondents also answered that it was either "very important" or "somewhat important" to be an expert in their chosen field. However, most HPOG participants also recognized the importance of employment itself, by rating as "very important" or "somewhat important" getting a good, steady job. Finally, although a large majority of HPOG participants thought it was very or somewhat important to have a lot of money, many more answered "somewhat" rather than "very."

Another set of questions about work goals and expectations asked HPOG participants about the conditions under which they would accept employment. Participants' responses revealed a tension between participants' acknowledgement that work itself is important and their desire to find a job in their chosen field (Exhibit 7-5). For example, while a majority answered that they strongly or somewhat agree they would take any job regardless of pay (62%), a majority also strongly or somewhat agreed that they only want a job related to their training (54%).

Exhibit 7-5. Conditions for Acceptable Jobs

	Response to Statement:			
	"I will take any job even if the pay is low."		"I want only the kind of job that is related to my training/education."	
Level of Agreement	Frequency	Percentage	Frequency	Percentage
Strongly agree	1,536	34.9	1,340	30.4
Somewhat agree	1,194	27.1	1,054	23.9
Somewhat disagree	662	15.0	963	21.9
Strongly disagree	986	22.4	1,022	23.2
Refused	4	<1	5	<1
Don't know	20	<1	18	<1
Total	**4,402**	**100**	**4,402**	**100**

Notes: Sample is 4,402 participants across 42 HPOG programs who enrolled in HPOG between September 1, 2013 and September 30, 2014, and responded to the 15-month follow-up survey of HPOG participants (participants from HPOG programs participating in PACE are not included).
Missing for this survey item=0
Source: 15-month follow-up survey of HPOG participants.

Finally, the 15-month follow-up survey of HPOG participants asked respondents for their reservation wage, or the lowest pay they would settle for when deciding to accept employment. The average was $12.81/hour or about $0.48 less than the average hourly wage for those employed in healthcare. When compared to their mean reservation wage at HPOG enrollment, participants' reservation wage at 15 months after enrollment had increased by $0.79 per hour.

8. Implications for Policy and Program Design

The HPOG 1.0 Program provided education and training to Temporary Assistance for Needy Families (TANF) recipients and other low-income individuals for occupations in the healthcare field that pay well and are expected to either experience labor shortages or be in high demand. Grantees designed and implemented programs to provide eligible participants with education, occupational training, and employment and support services to help them train for and find jobs in a variety of healthcare professions.

8.1 Concluding Observations

HPOG was successful in training high numbers of individuals in healthcare occupations, leading to employment in healthcare for many.

In just over 5 years of operation, non-tribal HPOG 1.0 grantees were successful in enrolling participants, serving more than 36,000 individuals (well above the target of 31,000 participants) and engaging most of them in healthcare occupational training. Of those who consented to participate in research (29,942 participants), 87 percent engaged in training within 3 years after enrolling in HPOG. Of those who enrolled in training, 78 percent had completed their training by 3 years after entering HPOG and another 5 percent were still in training at that time. The remainder had dropped out. Three years after enrolling in HPOG, employment in a given quarter increased from 52 percent to 75 percent. Based on the follow-up survey, over the 15 months after enrollment, 60 percent of survey respondents had held a job in healthcare, with 53 percent employed in healthcare at 15 months after enrollment. These results confirm that the policy strategy behind HPOG was successful in one of its major goals—recruiting and training low-income individuals in the healthcare professions. While the NIE documented employment and earnings outcomes for HPOG participants, it did not address the question of whether HPOG increased employment and earnings for those individuals, or increased the degree to which they chose to train as healthcare workers, relative to what would have occurred in the absence of HPOG. The HPOG Impact Study is taking up questions of HPOG's impacts in a separate study and report.[47]

Most engaged in short-term training for low-wage entry-level jobs. Those that completed longer-term training for higher-paying jobs, such as in licensed vocational or registered nursing, worked more and earned more than those completing short-term training. It is worth noting that regardless of training length, on average, participants who completed training increased their earnings relative to their pre-HPOG earnings.

Ninety percent of those who enrolled in a training course within 18 months of entering HPOG chose to train for one of 10 professions. Most of these were shorter-term trainings (with an average duration of 6 months or less). However, 20 percent chose longer-term courses to train as RNs or LPNs/LVNs. Training for LPN/LVN usually takes 1 year, and training for RN usually takes 2 or more years. The choice of whether to engage in longer-term nursing training likely depended on a number of factors, including individuals' academic ability and capacity to succeed in an academic college environment, as well as restrictions that some programs placed

on attending multiple or longer-term trainings. Moreover, many of those choosing the shorter-term training may have done so out of the need to enter employment sooner rather than later. As expected, those who completed the longer-term training as LPNs/LVNs or RNs fared better in post-program employment and earnings than those in shorter-term training for jobs such as nursing assistant, medical assistant, or medical records and health information technicians. However, results show that individuals completing any of these trainings had increased employment rates relative to 2 years prior to HPOG enrollment and with higher average quarterly earnings relative to earnings prior to enrollment. In addition, those employed post-completion had steadily increasing earnings over the 3 years after completion.

These findings suggest that programs may want to balance support of short- and long-term training. While supporting longer-term training leads to better individual outcomes, more low-income individuals can be served in shorter-term training using the same level of grant expenditures. Such an approach may reach a less academically accomplished group with less work experience. On the other hand, and as observed in the next discussion, providing more short-term training does not, by itself, support further movement along a career pathway for better jobs and wages.

Programs like HPOG trying to help individuals move along a career pathway need to address how to support those in longer-term training and encourage and create incentives for those who complete shorter-term training to return to school and continue on a career pathway.

The career pathways framework envisions that those who train for entry-level jobs in a given profession may move to higher-paying positions through a combination of work experience and further training. Findings in the report suggest that within the 3-year window covered by this report, movement up a career pathway through education and training did not occur for most HPOG participants. Although an encouraging 21 percent of those who completed one course began another within 3 years of program entry, many of those taking relatively short trainings, such as 6- to 8-week nursing assistant training, did not go on to a second training in this time period.[48] In addition, a majority of those individuals who did take a second training course enrolled in another short-term course for an entry-level occupation. While this combination of entry-level trainings may improve employability and earnings to some degree, it likely has a smaller impact than if the participant had moved on to a higher-level training. ACF is supporting follow-up studies that track HPOG participant outcomes and impacts at 36 and 72 months after random assignment, to continue to assess whether HPOG participants move forward on a career pathway over time.[49]

The results reviewed above suggest that while programs like HPOG should continue to support those in longer-term training for better-paying occupations, they also should consider strategies to increase the likelihood of additional career-growth training for participants who train for entry-level jobs. One possible strategy is to increase outreach and recruitment for training of incumbent entry-level healthcare workers, whether HPOG graduates or others. While a handful of HPOG programs had agreements with employers to train incumbent workers, this was not a widely practiced activity. Increasing support for incumbent workers through incentives to return to training and by developing more partnerships with healthcare

employers could provide a stronger basis for more individuals to train for higher-paying jobs along their career pathways.

Relatively few individuals with low educational attainment and skills enrolled in HPOG.

A review of the education-related characteristics of HPOG participants (Exhibit 3-1) reveals that at the time of program application, they had relatively high educational attainment (only 6 percent did not have a high school diploma or equivalency and 45 percent had 1 or more years of post-secondary education) and relatively good academic skills (85 percent and 74 percent tested at grade 8 or above for literacy and numeracy, respectively), compared to the TANF population overall. In 2015, about 40 percent of overall TANF recipients had less than 12 years of schooling and only about 8 percent had any educational experience beyond high school.[50]

The data on the educational levels of HPOG participants are consistent with findings about the use of basic educational services and academic eligibility requirements. For example, although 21 programs (43%) offered adult basic skills instruction (Exhibit 4-3), only 6 percent of participants had received adult educational services by 36 months after enrollment (Exhibit 4-4).[51] Also consistent with participant academic skill levels are academic eligibility requirements used by many HPOG programs. For example, about half of the programs required the high school diploma or equivalent, more than half required literacy to be at the 8th grade-level or above, and about just under half required numeracy to be at the eighth-grade level or above.[52]

The academic requirements of some healthcare training courses likely influenced HPOG programs' decisions to set specific educational attainment and skill requirements. Applicants with lower academic skills require more intensive and longer pre-training to prepare for coursework, increasing program costs per participant and average times to complete training, and decreasing numbers served. On the other hand, enrolling more individuals with low academic skills would increase service to the most needy.

Two strategies for program design and implementation could make it possible for HPOG programs to lower eligibility standards while enabling programs to increase participation in healthcare training among academically underprepared individuals. One strategy would be to increase the degree to which programs integrate adult basic education with healthcare training. This approach—one prominent model of which is I-BEST—has shown promising results in non-experimental studies and is currently being tested in an experiment as part of the PACE evaluation.[53] A second strategy is to develop program structures that create a close connection or pipeline between basic skills instruction and occupational training.

8.2 Prospects for Further Research

While this study found that grantees overall implemented HPOG as specified in the authorizing legislation, two important questions require further research:

- ***Did HPOG lead to better outcomes than participants would have achieved in its absence?*** This question concerns the impacts of HPOG on participants' and their

families' lives and is an important measure of its success relative to existing services and other policy initiatives.

- ***Did HPOG represent a solid first step along a career pathway and will HPOG participants continue to build careers and obtain higher-wage jobs through further work experience and education?*** Given the relatively short amount of time for HPOG grants, as well as for the observation window afforded to measure outcomes, it is not possible to address this question adequately within the limits of the current study. More follow-up time is needed to measure subsequent training and career growth.

ACF has funded three projects that begin to address these questions. Answering the first question is a core research goal of the (1) HPOG Impact Study, which uses an experimental design to estimate the effects of HPOG based on a survey initiated at 15 months after random assignment.[54] The (2) Career Pathways Intermediate Outcomes Study will analyze results of a follow-up survey fielded at 36 months after random assignment of individuals in the HPOG Impact Study sample and in PACE. The (3) Career Pathways Long-term Outcomes Study will analyze results from a similar survey at 72 months after random assignment. These longer-term views of HPOG participants' further work and educational experiences and outcomes will help address the second remaining research question.[55]

ACF used preliminary findings from the NIE to help refine HPOG Program design under HPOG 2.0, including more explicit and stronger requirements for grantees to:

- **Engage employers**, such as by designing HPOG programs with employers; having job developers or employer specialists on staff; partnering with sector organizations; and providing opportunities for work-based learning, including internships and Registered Apprenticeships.
- **Align programs with labor market demand**, including thorough analysis of traditional labor market data, real-time labor market trends, occupational wage data, and local training capacity.
- **Link HPOG education and training together along clearly defined career pathways**, with priority given to occupations that are expected to be full time, have regular hours, offer benefits, and/or have strong potential for advancement.
- **Incorporate evidence-based education and training components and practices**, such as specific strategies that promote advancement along career pathways, innovative approaches to basic skills education, and articulation of training along pathways, especially from noncredit to credit-bearing trainings.
- **Involve local TANF agencies in program design and implementation**, including ongoing partnerships to ensure referrals from the TANF program and willingness to allow participants to count HPOG activities toward meeting TANF work participation requirements, if possible, or to combine HPOG activities with countable work activities.

- **Ensure HPOG training results in employer or industry recognized credentials**, including a professional license, third-party certification, or postsecondary educational certificate or degree (as well as a Registered Apprenticeship certificate).

ACF also funded a national evaluation of the HPOG 2.0 grantees that includes a descriptive evaluation (comprised of an implementation study, an outcome study and a systems study) and an impact evaluation.[56]

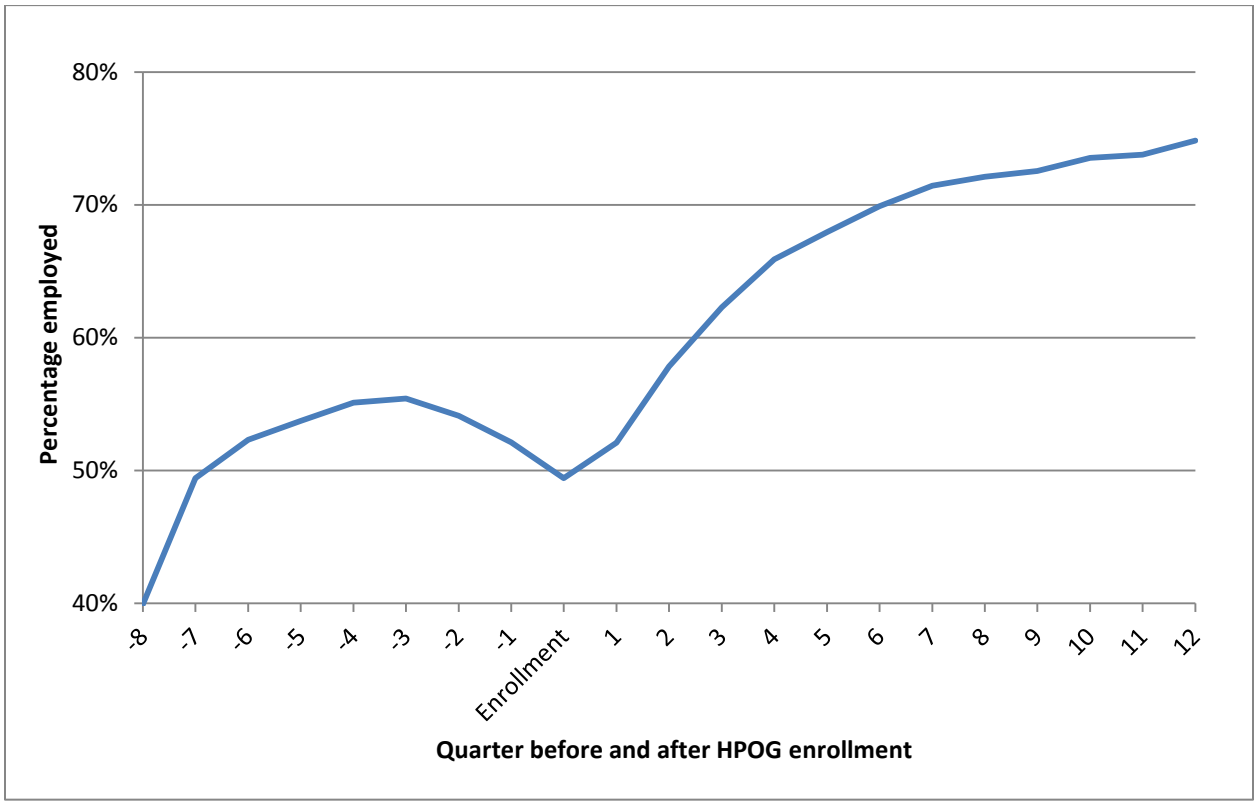
Appendix A. Outcome Findings and Samples Presented in the *Descriptive Implementation and Outcome Study Report* and in this *NIE Final Report*

Exhibit A-1. Outcome Findings and Samples Presented in the *Descriptive Implementation and Outcome Study Report* and in this *NIE Final Report*

		Descriptive Implementation and Outcome Study Report		*Final Report*	
Topic Area	**Sample**	**Source**	**Sample Size**	**Source**	**Sample size**
Participant Characteristics at Intake	All HPOG participants	PRS	20,384 enrolled 9/30/10–11/1/14	PRS	29,942 enrolled 9/30/10–9/30/15
Supports, Healthcare Training, Credentials	Primary analysis sample—HPOG participants with specific number of follow-up months after enrollment	PRS	12,614 enrolled 9/30/10–4/1/13; allows for analysis 18 months post-enrollment	PRS	20,384 enrolled 9/30/10–4/1/14; allows for analysis 18 months post-enrollment 8,748 enrolled 9/30/10–10/1/12; allows for analysis 36 months post-enrollment
Participant Quarterly Employment and Earnings	Subset of primary analysis sample; those with NDNH data match for a specific number of quarters following enrollment	NDNH	6,210–12,251, depending on quarter following enrollment; up to 8 quarters	NDNH	19,765 depending on quarter following enrollment; up to 12 quarters. Individual quarter samples range from 19,765 to 16,502
Characteristics of Jobs: Occupational Sector, Hourly Wage, Employee Benefits	Subset of primary analysis sample	PRS	6,739 employed participants in the PRS who left HPOG in the 18 months after enrollment as of 10/1/2014	15-month follow-up survey of HPOG participants	4,646
Participant Self-reported Program Experiences and Educational and Career Aspirations	Subset of all HPOG participants; those who responded to survey	N/A	N/A	15-month follow-up survey of HPOG participants	4,646

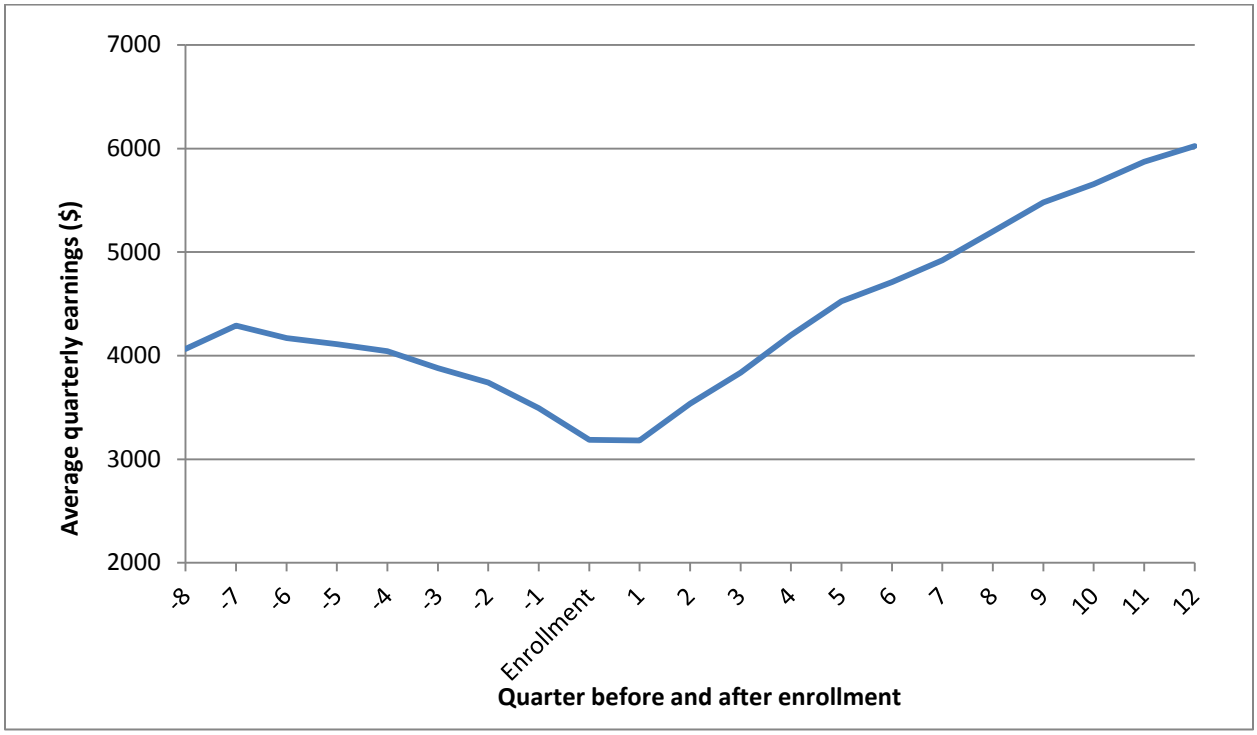
Appendix B. Employment and Earnings Outcomes for 36-month Sample

Exhibit B-1. Employment of HPOG Participants, by Quarter (36-month Sample)



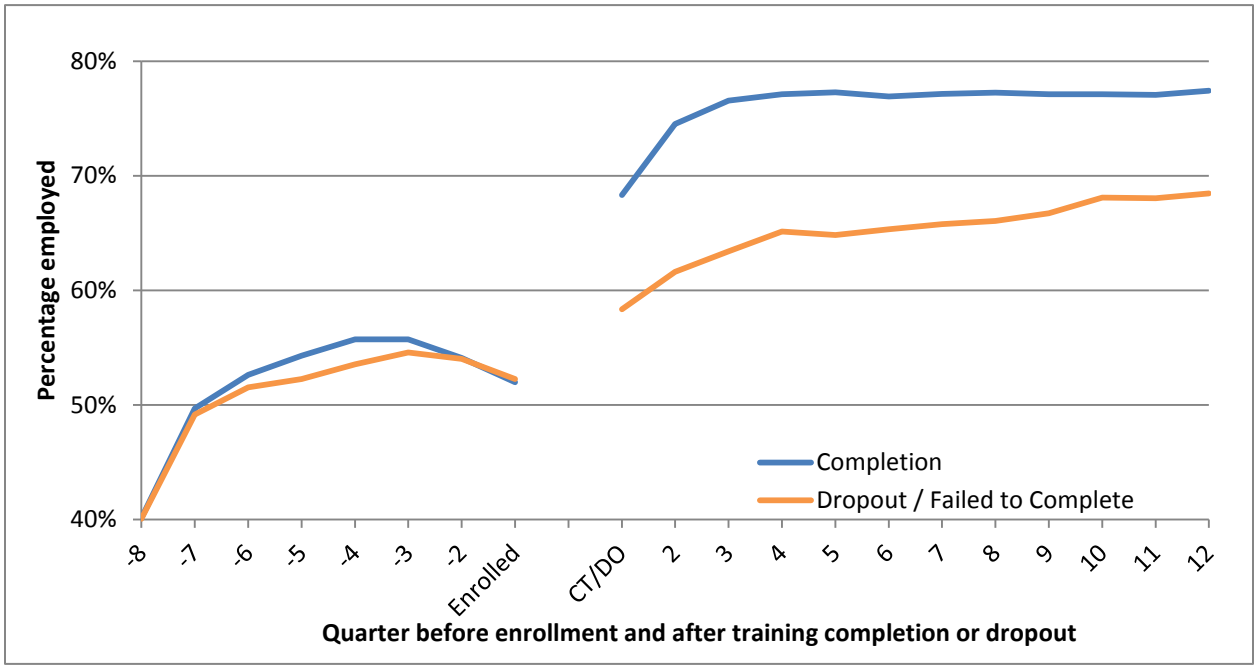
Notes: Sample includes participants with at least 36 months of post-enrollment experience (enrolled by September 30, 2012). N ranges from 7,338 8 quarters prior to enrollment, to 8,512 in the quarter of enrollment, to 8,512 in the final quarters post-enrollment.
Source: NDNH.

Exhibit B-2. Average Earnings of Employed HPOG Participants, by Quarter (36-month Sample)



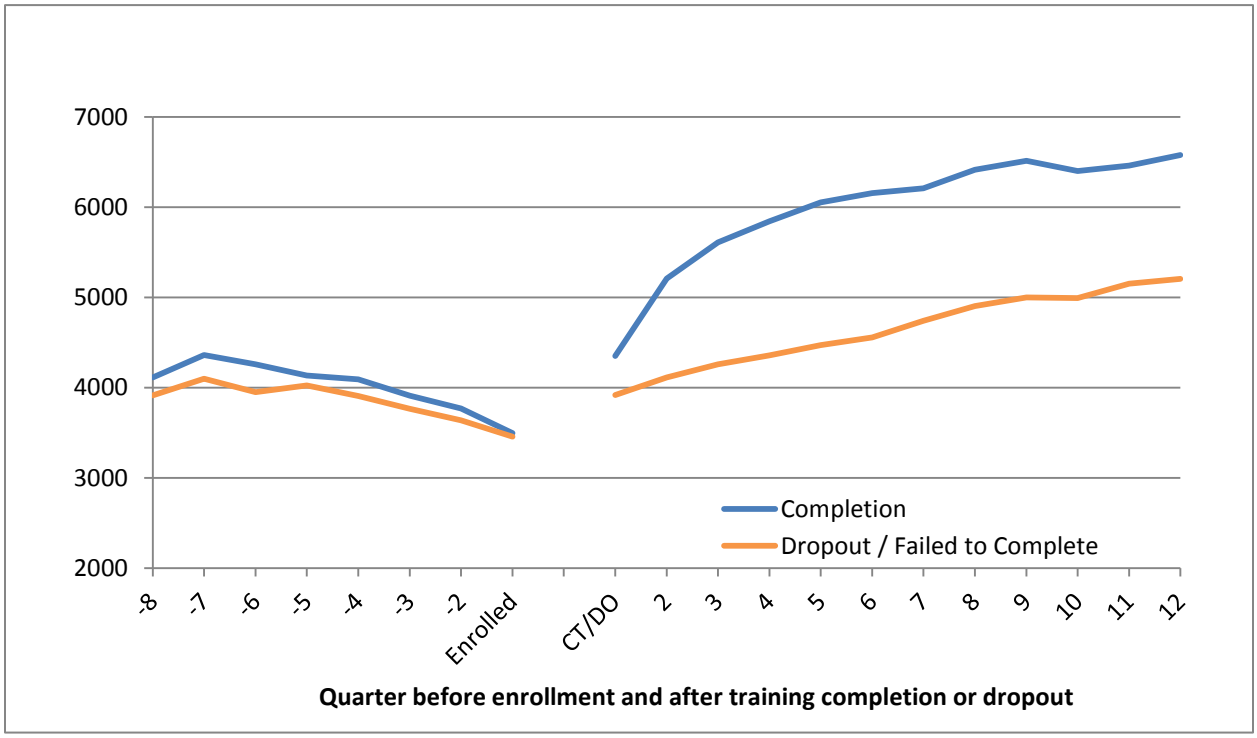
Notes: Sample includes participants with at least 36 months post-enrollment experience (enrolled by September 30, 2012) who were employed in a given quarter. N ranges from a low of 2,931 to a high of 6,370.
Source: NDNH.

Exhibit B-3. Employment of Participants in Quarters before Enrollment and After Training Completion or Dropout (36-month Sample)



Notes: Sample includes participants with at least 36 months post-enrollment experience (enrolled by September 30, 2012) who had completed training or failed to complete training. CT stands for quarter completed training and DO stands for quarter dropped out of training.
N ranges from 4,948 to 5,850 for those who completed training and 2,177 to 2,473 for those who dropped out or failed to complete.
Source: NDNH.

Exhibit B-4. Average Earnings of Participants in the Quarters before Enrollment and After Training Completion or Dropout (36-month Sample)



Notes: Sample includes participants with at least 36 months post-enrollment experience (enrolled by September 30, 2012) who had completed training or failed to complete training and were employed in a given quarter. CT stands for quarter completed training and DO stands for quarter dropped out of training.
N ranges from 2,015 to 4,511 for those who completed training and 872 to 1,617 for those who dropped out or failed to complete.
Source: NDNH.

Appendix C. Characteristics of the 18- and 36-month Samples

Exhibit C-1. Demographic Characteristics of HPOG Enrollees at Intake (18-month and 36-month Samples)

Characteristic	18-month Sample		36-month Sample	
	Number of Participants	Percentage of Participants	Number of Participants	Percentage of Participants
Gender				
Male	2,333	11%	968	11%
Female	18,050	89	7,780	89
Missing	1		0	
Race/Ethnicity				
White non-Hispanic	7,784	39	3,589	41
Black non-Hispanic	7,394	37	3,234	37
Hispanic/Latino any race	3,677	18	1,326	15
Asian or Hawaiian, Pacific Islander	628	3	227	3
Native American or Alaska Native	144	1	58	1
Two or more races, non-Hispanic	517	3	223	3
Missing	240		91	
Age				
< 20	1,666	8	754	9
20-29	9,207	45	3,990	46
30-39	4,821	24	2,060	24
40-49	2,880	14	1,214	14
50+	1,736	9	693	8
Missing	74		37	
Marital Status				
Married	3,271	17	1,421	17
Never Married	12,057	62	5,057	61
Divorced, widowed, or separated	4,132	21	1,754	21
Missing	924		516	
Dependent Children				
Yes	12,379	64	5,465	66
No	6,972	36	2,813	34
Missing	1,033		470	
Highest Educational Attainment				
Less than 12th grade	1,115	6	476	6
High school equivalency or GED	2,616	13	1,130	13
High school graduate	7,580	38	3,757	44
1-3 years of college/technical school	7,144	36	2,634	31
4 years or more of college	1,340	7	471	6
Missing	589		280	3
Literacy at 8th Grade or Higher				
Yes	14,164	86	5,760	85
No	2,390	14	992	15
Missing	3,830		1,996	

Characteristic	18-month Sample		36-month Sample	
	Number of Participants	Percentage of Participants	Number of Participants	Percentage of Participants
Numeracy at 8th Grade or Higher				
Yes	11,679	73	4,865	74
No	4,289	27	1,667	26
Missing	4,416		2,216	
Currently in School				
Yes	6,239	33	3,020	38
No	12,634	67	4,916	62
Missing	1,511		812	
Currently Employed				
Yes	8,059	40	3,353	39
No	12,121	60	5,288	61
Missing	204		107	

Notes: 18-month sample includes 20,384 participants with at least 18 months post-enrollment experience (enrolled by April 1, 2014) and 36-month sample includes 8,748 participants with at least 36 months post-enrollment experience (enrolled by October 1, 2012). Percentages are of non-missing responses at enrollment.
Missing: Literacy and numeracy are missing in 18 and 21 percent of 18-month responses and 20 and 25 percent of 36-month responses, respectively, which includes those participants for whom these skills were not tested at enrollment. For all other characteristics, missing responses range from 0 to 9 percent.
Source: PRS, 2015.

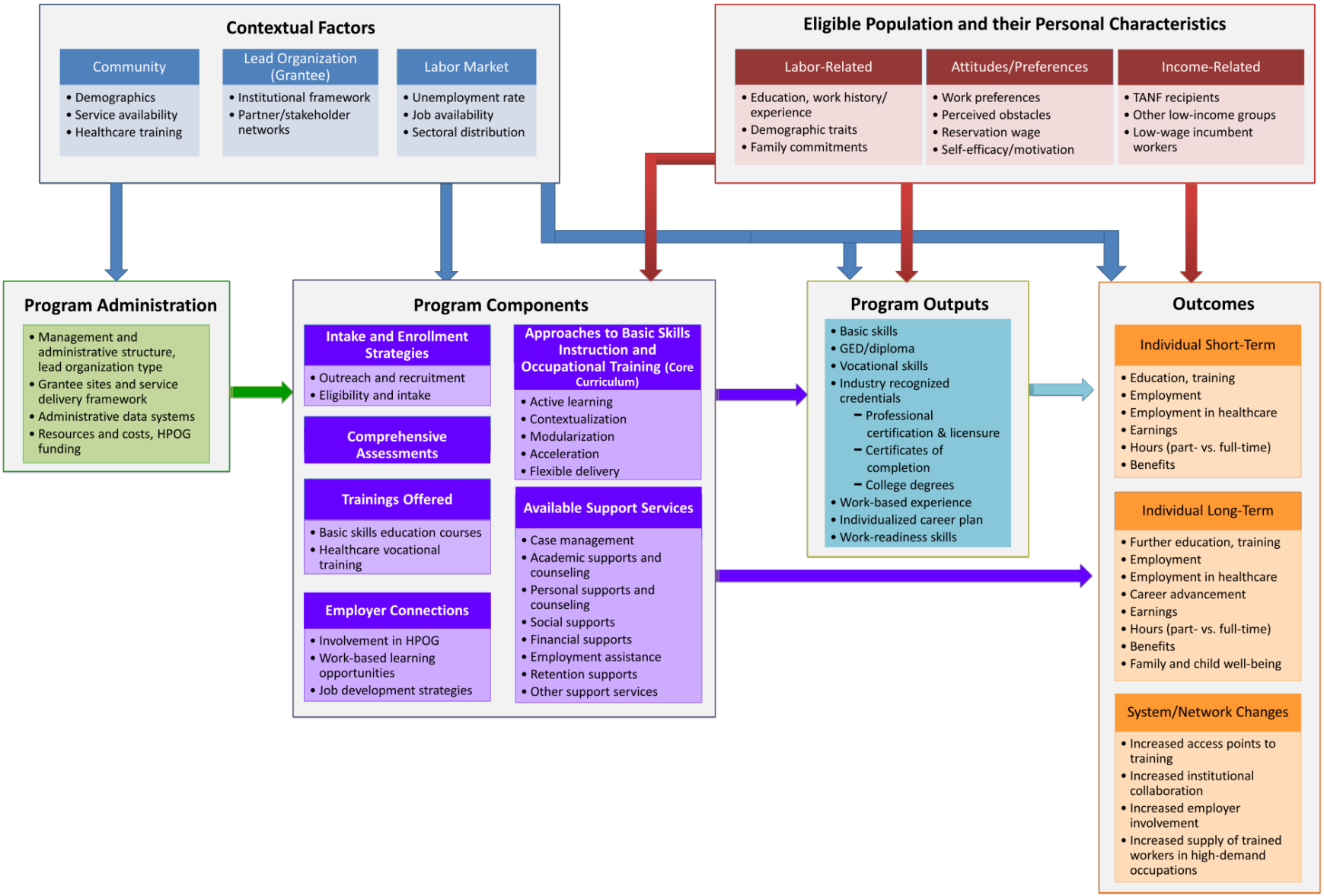
Exhibit C-2. Income and Benefit Receipt of HPOG Participants at Enrollment (18-month and 36-month Samples)

Characteristic	18-month Sample		36-month Sample	
	Number of Participants	Percentage of Participants	Number of Participants	Percentage of Participants
Household Income				
0	2,070	12.0%	1,059	14.4%
$1 to $9,999	6,071	35.1	2,541	34.7
$10,000-$19,999	4,824	27.9	2,030	27.7
$20,000-$29,999	2,546	14.7	1,016	13.9
$30,000+	1,788	10.3	686	9.4
Missing	3,085		1,416	
Individual Income				
0	4,638	25.0	2,187	28.0
$1 to $9,999	7,537	40.6	3,013	38.6
$10,000-$19,999	4,210	22.7	1,749	22.4
$20,000-$29,999	1,674	9.0	649	8.3
$30,000+	504	2.7	200	2.6
Missing	1,821		950	
Receiving TANF				
Yes	2,821	14.8	1,293	16.0
No	16,303	85.2	6,803	84.0
Missing	1,260		652	
Receiving SNAP				
Yes	10,587	54.4	4,628	56.2
No	8,877	45.6	3613	43.8
Missing	920		507	

Notes: 18-month sample includes 20,384 participants with at least 18 months post-enrollment experience (enrolled by April 1, 2014) and 36-month sample includes 8,748 participants with at least 36 months post-enrollment experience (enrolled by October 1, 2012). Percentages are of non-missing responses at enrollment.
Source: PRS, 2015.
Missing: Missing responses range from 5 to 17 percent.

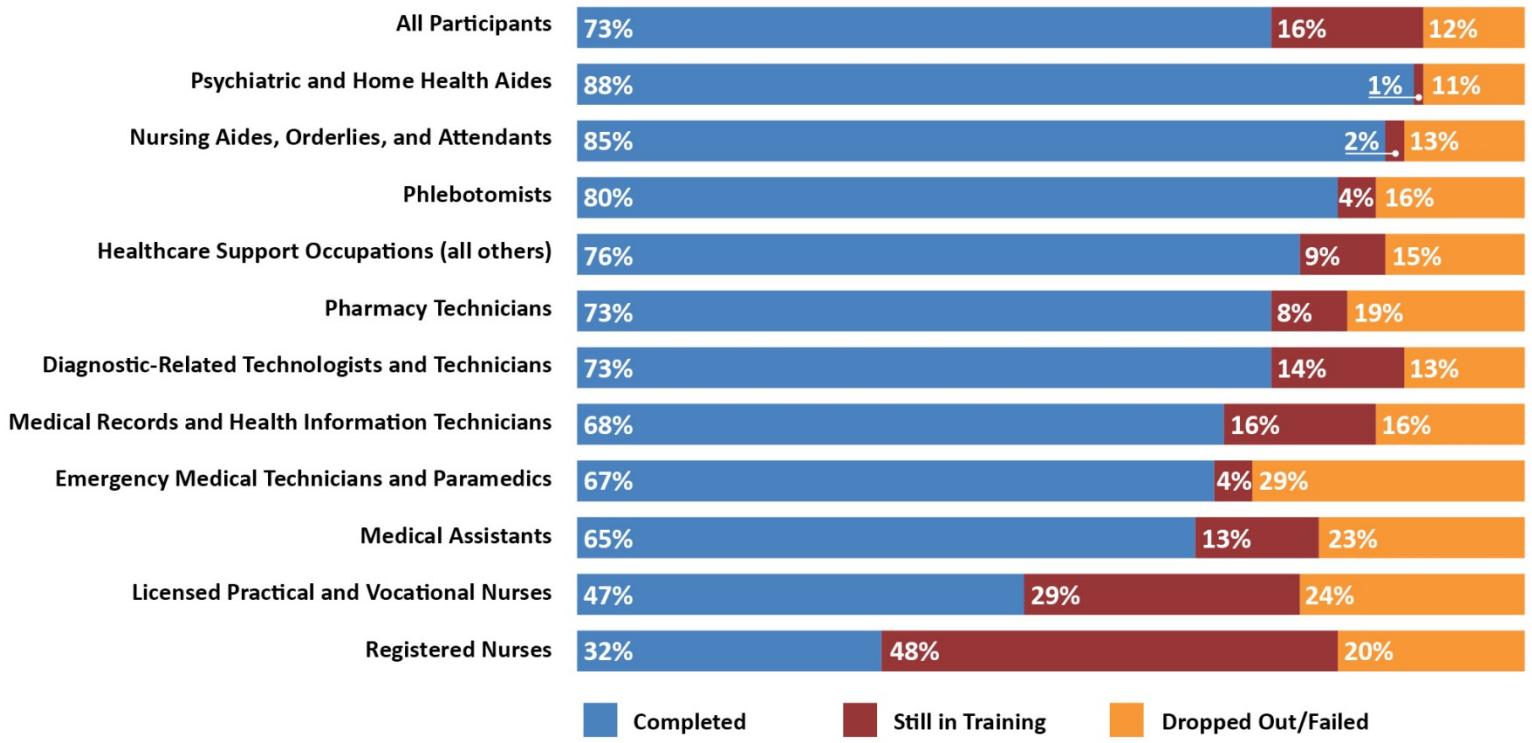
Appendix D. HPOG Program Logic Model

Exhibit D-1. HPOG Program Logic Model



Appendix E. Completion Status by Healthcare Occupation Types for 18-month Sample

Exhibit E-1. Completion Status by Healthcare Occupation Types among Participants Who Began Training (18-month Sample)



Endnotes

[1] Authority for these demonstrations is included in the Affordable Care Act (ACA), Public Law 111-148, 124 Stat. 119, March 23, 2010, sect. 5507(a), "Demonstration Projects to Provide Low-Income Individuals with Opportunities for Education, Training, and Career Advancement to Address Health Professions Workforce Needs," adding sect. 2008(a) to the Social Security Act, 42 U.S.C. 1397g(a).

[2] A second round of 32 grants was awarded in 2015 through extension of the HPOG Program by the Protecting Access to Medicare Act (PAMA) of 2014 (H.R. 4302; Public Law. 113–93, April 1, 2014, Title I Medical Extenders, Section 208, "Extension of Health Workforce Demonstration Project for Low-Income Individuals," Section 2008(c)(1) of the Social Security Act (42 U.S.C. 1397g(c)(1)) is amended by striking "2014" and inserting "2015."

[3] Werner, Alan, Robin Koralek, Pamela Loprest, Radha Roy, Deena Schwartz, Ann Collins, and Allison Stolte. (2016). *Descriptive Implementation and Outcome Study Report: National Implementation Evaluation of the Health Profession Opportunity Grants (HPOG) to Serve TANF Recipients and Other Low-Income Individuals.* OPRE Report # 2016-30. Washington, DC: Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

Bernstein, Hamutal, Lauren Eyster, Jennifer Yahner, Stephanie Owen, and Pamela Loprest. (2016). *Systems Change under the Health Profession Opportunity Grants (HPOG) Program.* (OPRE Report # 2016-50). Washington, DC: Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services, 2016.

[4] Werner et al. 2016.

[5] Bernstein et al. 2016.

[6] Note that many HPOG grantees received no-cost extensions from ACF to extend services to participants still in training by September 30, 2015. Those participants' experiences and outcomes are included in this report.

[7] NDNH employment and earnings data were under-reported by the State of Washington in several quarters in 2015 and 2016. All enrollees in our 18-month and 36-month samples from the two Washington State grantees are affected and may have underreported earnings in this report. These enrollees make up 3.4 percent of the 18-month sample and 3.6 percent of the 36-month sample.

[8] The 15-month follow-up survey of HPOG participants asked about a range of services and activities that included HPOG training, but participants may also have responded regarding other services and activities they accessed in the community. Note that three HPOG programs were included in the Pathways for Advancing Careers and Education (PACE) project. The PACE follow-up survey data for participants in those sites are included in this report.

[9] Note that the 36-month sample in this report is a subset of the 18-month sample. Findings for the two samples do not represent the same participants at two points in time. Because the 36-month sample includes participants who enrolled prior to October 1, 2012, the results for this sample represent those of enrollees in the first 2 years of the program's implementation.

[10] This is not surprising, as the 36-month sample is a subset of the 18-month sample. Even though the 36-month sample includes slightly more participants who eventually complete longer-term courses for higher-paid occupations, results for the initial quarters post-enrollment are very similar. Differences in employment and earnings for the two samples are most interesting for results post-training completion.

[11] *Employment* is defined as having greater than $58 of earnings in a quarter, the equivalent of 1 day of work at minimum wage.

[12] Note that past literature has shown that training participants commonly experience a "dip" in earnings right before entering the training program, referred to as an Ashenfelter's dip (Orley Ashenfelter and David Card, "Using the Longitudinal Structure of Earnings to Estimate the Effect of Training Programs," *Review of Economics and Statistics* 67 (1985): 648–60). The effect of any dip is mitigated somewhat here by examining earnings 8 quarters

before entry. However, future experimental results will show whether HPOG training caused earnings to increase for the treatment (HPOG) group.

[13] Earnings in the exhibit combine earnings across multiple jobs. Any positive amount of earnings in the quarter is included. Earnings in a quarter were top-coded at $30,000 to limit skewing of averages by potential data error outliers.

[14] This includes individuals who started training and dropped out or failed to complete as well as HPOG enrollees who never started a healthcare training.

[15] For example, the reasons why individuals drop out of training also may affect their success in finding a job.

[16] Results discussed so far are for participants in the sample with at least 18-months since HPOG enrollment. In Appendix B, we present employment and earnings before enrollment and after training completion for both samples of participants with 18 and 36 months of post-enrollment program data. Participants in the 36-month sample have more months of post-enrollment program data, leading to a higher percentage of longer-term training completions. Participants in the 36-month sample had an average training duration of 5.3 months, while those in the 18-month sample had an average of 3.5 months (Chapter 4).

[17] Sample sizes are smaller in the last quarters after completion, especially for longer trainings. This means estimates are measured with less precision.

[18] The 15-month follow-up survey of HPOG participants was conducted for all participants who were randomly assigned as part of the HPOG Impact Evaluation and for a subset of participants in grantees that did not participate in the Impact Evaluation. This subset was roughly those who enrolled in HPOG during the same time period in which random assignment had taken place so that survey responses would generally reflect the same time period for all surveyed. It also surveyed individuals who had less than 18 months of follow-up time during the HPOG program. Thus, the survey sample included here overlaps with, but is not the same as the 18-month sample.

[19] ACA, Public Law 111-148, 124 Stat. 119, March 23, 2010, sect. 5507(a), "Demonstration Projects to Provide Low-Income Individuals with Opportunities for Education, Training, and Career Advancement to Address Health Professions Workforce Needs."

[20] Reported characteristics are of all participants through September 30, 2015. Characteristics of the samples of participants with 18 and 36 months post-enrollment experience (the sample used in other sections of this report) can be found in Appendix C.

[21] Approximately 17 percent of participants are missing information on literacy assessment and 20 percent are missing information on numeracy assessment. These participants may not have been administered an assessment for literacy or numeracy.

[22] Federal poverty level guidelines for 2014 can be found at http://aspe.hhs.gov/poverty/14poverty.cfm.

[23] Single mothers include those who were never married, divorced, widowed, or separated.

[24] See HPOG logic model in Appendix D.

[25] See HPOG logic model in Appendix D.

[26] See Werner et al. 2016, page 32.

[27] *Source:* HPOG Impact Study site visits, 2014.

[28] *Source:* HPOG Grantee survey, 2014, Q8.6.

[29] *Source:* HPOG Impact Study site visits, 2014.

[30] *Source:* PRS, 2014.

[31] See Werner et al. 2016, page. 63.

[32] *Source:* HPOG Management and Staff survey, 2014, Q20-S.

[33] *Source:* HPOG Grantee survey, 2014, Q9.14.

[34] *Source:* HPOG Grantee survey, 2014, Q9.15.

[35] *Source:* HPOG Grantee survey, 2014, Q9.17.

[36] *Source:* HPOG Grantee survey, 2014, Q9.18.

[37] HPOG funds cannot be used for medical care unless it is an integral but subordinate part of a social service for which grant funds may be used.

[38]*Source:* HPOG Grantee survey, 2014, Q9.22.

[39] Note that 44 percent of HPOG participants received soft skills education as preparation for training and employment. See Exhibit 4-2.

[40] *Source:* HPOG Grantee survey, 2014, Q8.13.

[41] Completion status for the 18-month sample is shown in Appendix E.

[42] In the PRS, participants are considered still in training if they do not have a completion or dropout date entered. Therefore, some participants included in the "still in training" estimate at 36 months after enrollment may be the result of data entry errors in which a completion or dropout date was not recorded by the grantee.

[43] The 36-month sample is used here instead of the 18-month sample to better represent training time to completion. The vast majority of participants in the 36-month sample who participated in healthcare training had completed (97%), so measures of time in training better represent the actual training course lengths.

[44] Some programs chose to restrict participants to one training course to maximize the number of people benefitting from the program.

[45] Slightly different versions of the survey were used for the sites not included in the HPOG-Impact study, so some items were not asked of all respondents. These are explained in exhibit notes.

[46] Note that the exhibit only describes change over time. Readers should not conclude that such changes are necessarily due to participation in HPOG. Also, note that seven 7of the research sample had 4 or more years of college at program entry (see Exhibit 3-1).

[47] Peck, Laura R., Alan Werner, Eleanor Harvill, Daniel Litwok, Shawn Moulton, Alyssa Rulf Fountain, and Gretchen Locke. (Forthcoming). *Health Profession Opportunity Grants (HPOG 1.0) Impact Study Interim Report: Program Implementation and Short-Term Impacts.* Washington, DC: Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

[48] It should be acknowledged that it is possible that HPOG participants went on to take training within the three-year window from a non-HPOG program or institution and these results were not recorded in the HPOG management information system.

[49] The Career Pathways Intermediate Outcomes (CPIO) and Career Pathways Long-Term Outcomes (CPLO) Studies will rigorously evaluate the intermediate and longer-term impact of career pathways program models on the educational progress and employment and earnings of individuals who assigned to the treatment group. For more information see: https://www.acf.hhs.gov/opre/research/project/career-pathways-intermediate-outcomes-cpio-study.

[50] Office of Family Assistance, Administration for Children and Families, U.S. Department of Health and Human Services. Characteristics and Financial Circumstances of TANF Recipients, Fiscal Year 2015. Web: https://www.acf.hhs.gov/ofa/resource/characteristics-and-financial-circumstances-of-tanf-recipients-fiscal-year-2015, Table 20. Accessed 6-14-2017.

[51] These numbers likely understate the proportion of students who received basic skills education, since basic skills education was sometimes integrated into occupational training and provided through referrals to outside agencies.

[52] Alan Werner and Jennifer Buell, with Nathan Sick. (2017). *The Health Profession Opportunity Grants (HPOG) 1.0 Eligibility Criteria and Application Procedures.* OPRE Report #2017-09. Washington, DC: Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

[53] Davis Jenkins, Matthew Zeidenberg, and Gregory Kienz. (2009). *Building Bridges to Postsecondary Training for Low-Skill Adults: Outcomes of Washington State's I-BEST Program*, Community College Research Center Teachers College, Columbia University and Abt Associates Inc. (2015). *Pathways for Advancing Careers and Education (PACE). Technical Supplement to the Evaluation Design Report: Impact Analysis Plan.* OPRE Report # 2015-100. Washington, DC: Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

[54] The *HPOG Impact Study Interim Report* is scheduled for release in 2018.

[55] The CPIO report on 36-month impacts for HPOG is scheduled for release in 2019 and the CPLO report on 72-month impacts is scheduled for 2021.

[56] For more information see: https://www.acf.hhs.gov/opre/research/project/national-evaluation-of-the-2nd-generation-of-health-profession-opportunity-grants-hpog-20-national-evaluation.